SERVICE MANUAL & PARTS LIST (without price)

Handheld Personal Computer

A-10/A-11(ZX-305/314)

CASSIOPEIA

MAR. 1997

A-11

INDEX

CASIO®

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* Windows is a registered trademark of Microsoft Corporation in the U.S.A. and other countries.

* i486DX and Pentium are registered trademarks of Intel Corporation.

HARDWARE SPECIFICATIONS

General Specifications

Model: A-10/A-11

Display: 480 × 240 dots/0.24 dot pitch, FSTN LCD, 4 grayscale monochrome

CPU: SH3

Memory **RAM:** (A-10) 2 Mbytes, (A-11) 4 Mbytes
ROM: 4 Mbytes

Speaker: Sound

Interfaces: RS-232C: 115.2 kBPS
Data communication jack
PC card slot
Infrared port (IrDA Standard)

Power Supply: Main
Two AA-size alkaline batteries LR6 (AM3);rechargeable battery pack(NH-10); AC adaptor (AD-C50150)
Back-up
One CR2032 lithium battery

Power Consumption: 3.8 W

Battery Life: Main
Two AA-size alkaline batteries:20 hours (in Word, continuous cycle of one-minute input and 10-minutes input standby)
Rechargeable battery pack:14 hours (in Word, continuous cycle of one-minute input and 10-minutes input standby)
* Main Battery life is shortened considerably by use of a modem card or any other high power consumption PC card.
Back-up
5 year (when main battery is replaced immediately after appearance of low battery message)
1 month (when unit is left without a main battery)

Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F)

Dimensions (excluding projections):
Unfolded: 15.0H × 175.0W × 175.0D mm (5/8"H × 6-7/8"W × 6-7/8"D)
Folded: 26.5H × 175.0W × 92.0D mm (1"H × 6-7/8"W × 3-5/8"D)
Weight: 380 g (13.4 oz) including batteries

Electrical Specifications

Current Consumption (V-in: 2.6 V ±0.02 V, LCD Contrast VR: Max.):

Main Battery: Diagnostics Program (Power Control. Refer to page 37)
40 MHz: 210 mA or under
Sleep: 67 mA or under
Standby: (A-10) 0.8 mA or under
(A-11) 1.0 mA or under

Welcome Wizard (Normal Operation)
ON: 82 mA or under
OFF: (A-10) 0.8 mA or under
(A-11) 1.0 mA or under

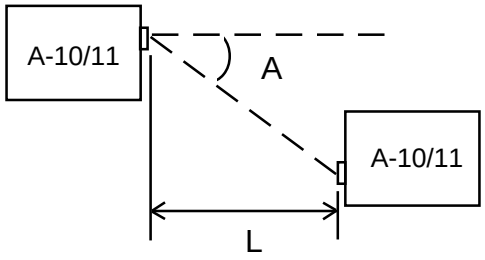
Back-up Battery: OFF: (A-10) 30 ~ 150 μA
(A-11) 50 ~ 250 μA

Voltage Detectors:

VDET1: 2.0 ± 0.04 V or under (Low battery message detector for alkaline batteries)
VDET2: 1.6 ± 0.04 V or under (Foced power off detector for alkaline batteries)
VDET1R: 2.3 ± 0.03 V or under (Low battery message detector for rechargeable battery)
VDET2R: 1.9 ± 0.02 V or under (Foced power off detector for rechargeable battery)
VDETS: 2.7 ± 0.03 V or under (Low battery message detector for back-up battery)

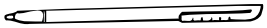
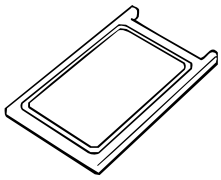
IrDA:

No.	Length (L)	Angle (A)
1	L = 100 cm	A = ±15 degree
2	L = 5 cm	A = 0 degree



UNPACKING

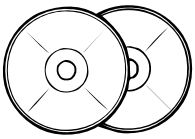
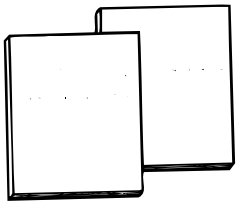
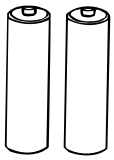
- A-10/A-11 Unit
- Stylus
- Dummy Card
- RS-232C Cable

The stylus is inserted into the A-10/A-11 unit.

The dummy card is inserted in the A-10/A-11 unit.

- CD-ROM (two)
- Manuals (Hardware Manual, User's Guide)
- AA-size Alkaline Batteries (two)

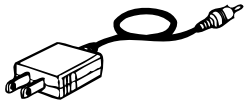




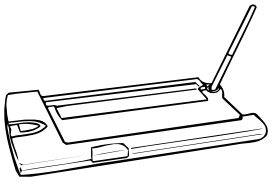
The CD-ROM contains an installer, software applications, and software application documentation.

OPTIONS

UT-S11

This set includes an AC adapter, charger, rechargeable battery pack, and CR-A10.Slip the A-10/A-11 into the CR-A10 for quick and easy exchange of data with a desktop computer. Also, the CR-A10 makes it possible to use the RS-232C cable and the Charger at the same time.

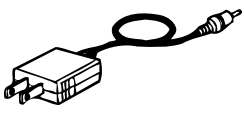




AC Adapter | Charger | Rechargeable Battery Pack | CR-A10

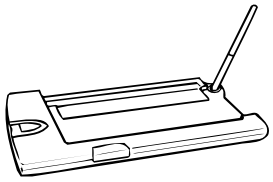
AC-S10

This set includes an AC Adapter and CR-M10. The CR-M10 makes it possible to use the RS-232C cable and the AC Adapter at the same time.



AC Adapter | CR-M10

CR-A10



CR-M10

CH-50150A

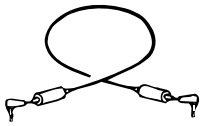
Charger

NH-10A

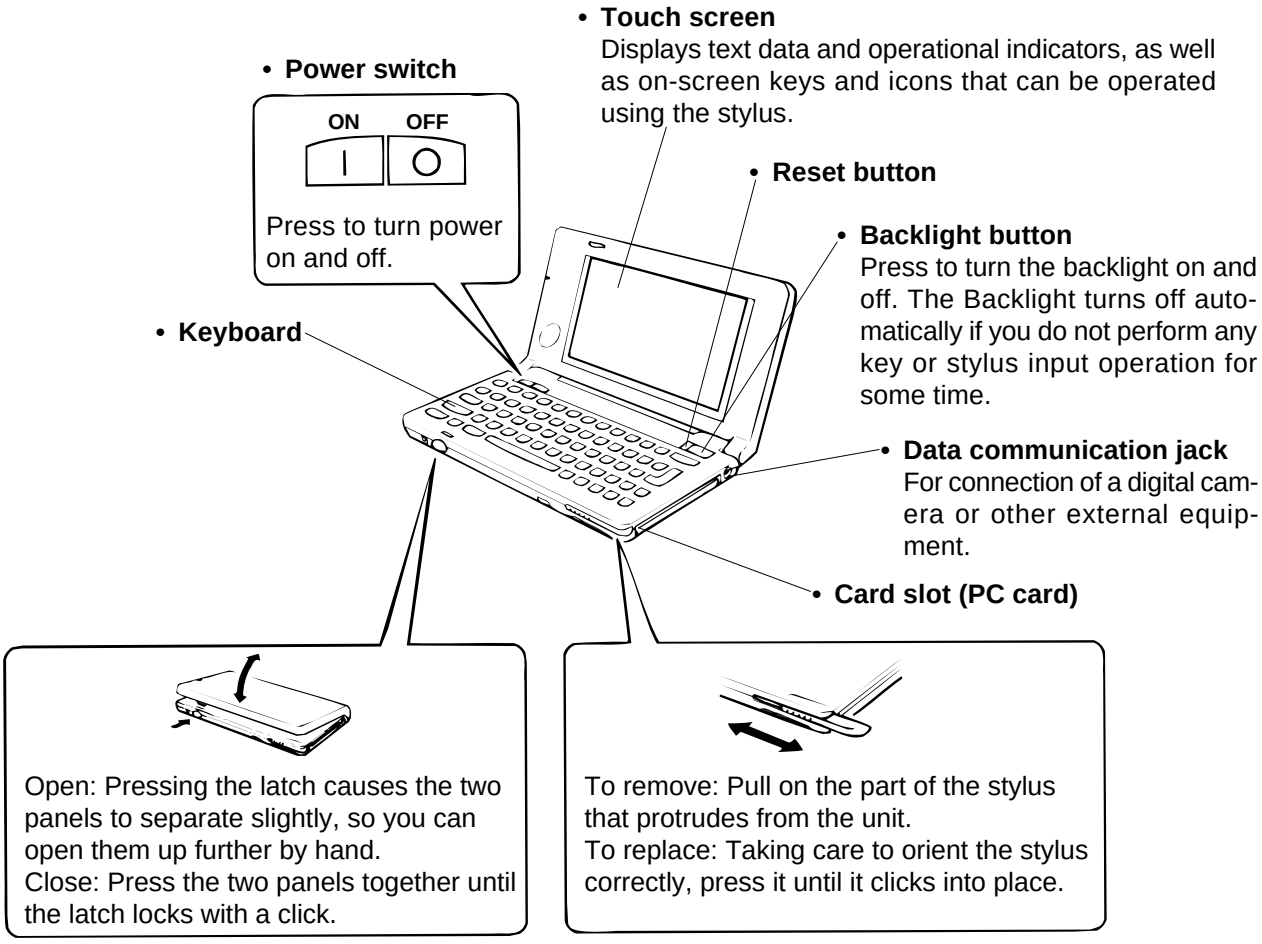
Rechargeable Battery Pack

Data Communication Cable SB-62

This cable is used to connect a digital camera or other external equipment to the A-10/A-11.

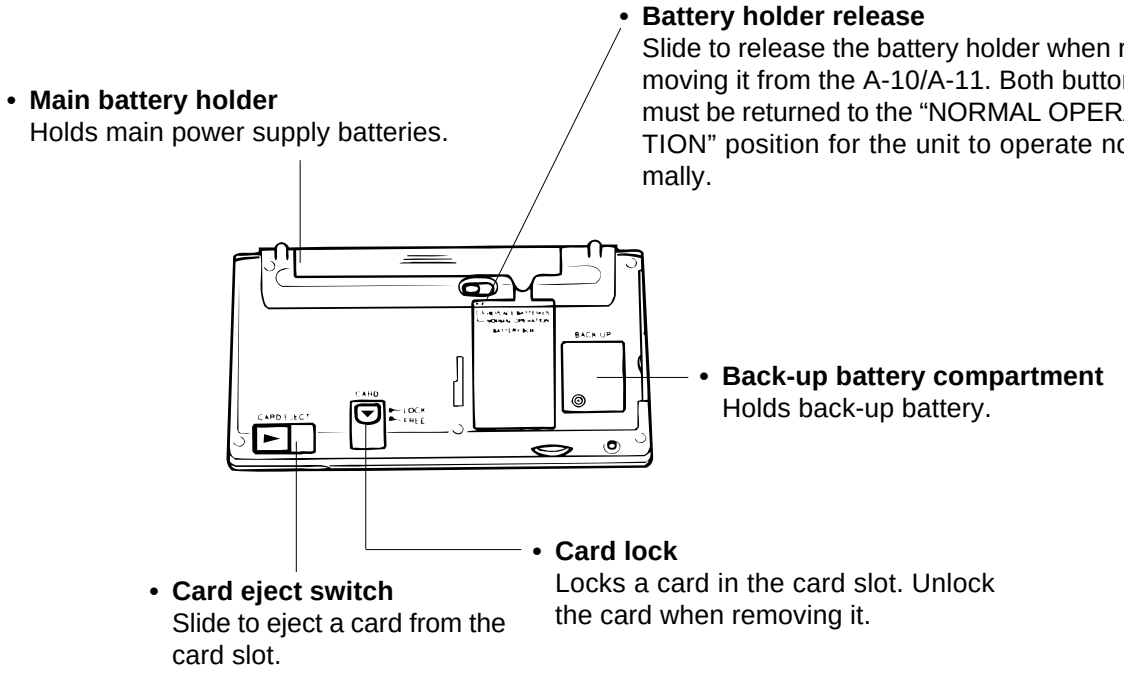


GENERAL GUIDE


• Touch screen
Displays text data and operational indicators, as well as on-screen keys and icons that can be operated using the stylus.
• Power switch
ON
OFF
Press to turn power on and off.
• Reset button
• Backlight button
Press to turn the backlight on and off. The Backlight turns off automatically if you do not perform any key or stylus input operation for some time.
• Keyboard
• Data communication jack
For connection of a digital camera or other external equipment.
• Card slot (PC card)
Open: Pressing the latch causes the two panels to separate slightly, so you can open them up further by hand.
Close: Press the two panels together until the latch locks with a click.
To remove: Pull on the part of the stylus that protrudes from the unit.
To replace: Taking care to orient the stylus correctly, press it until it clicks into place.

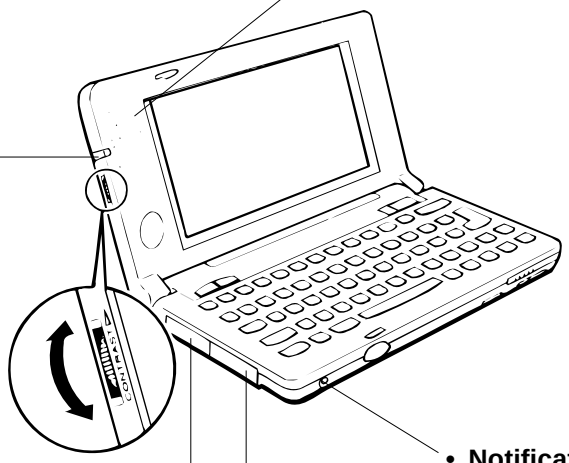
• **Panel latch**
Press to open the panels.

• **Stylus**
For performing operations on the touch screen.
⚠ Take care to avoid damaging or losing the stylus.


• Battery holder release
Slide to release the battery holder when removing it from the A-10/A-11. Both buttons must be returned to the “NORMAL OPERATION” position for the unit to operate normally.
• Main battery holder
Holds main power supply batteries.
BACK UP
• Back-up battery compartment
Holds back-up battery.
• Card lock
Locks a card in the card slot. Unlock the card when removing it.
• Card eject switch
Slide to eject a card from the card slot.

- **Flashing light**
  Lights when an alarm time is reached and to indicate other application-specific conditions.

- **Speaker**
  Outputs alarm tones and other sounds.



- **Contrast dial**
  Rotate to adjust diplay contrast. Rotate upwards to make the display lighter or downwards to make it darker.

- **Notification Button**
  Turns off the flashing light and stops the alarm.

- **Infrared port**

- **RS-232C/Power connector**
  For connection of an RS-232C cable, docking station, mini dock or battery pack charger.

DESKTOP COMPUTER SYSTEM CONFIGURATION

You should check to make sure that the configuration of your desktop computer is as described below to support the installer and the software applications contained on the CD-ROM.

Minimum Requirements:

Desktop computer with a 486/33DX or higher processor (Pentium P90 recommended)
Microsoft Windows 95 (U.S. Version) or later operating system (will not run on earlier versions of Windows or Windows NT)
8MB of memory (12MB recommended)
10 - 20 MB of available hard disk space (actual requirements will vary based on features you choose to install and current system configuration)
Available 9 or 25 pin Communications Port (adapter required for 25 pin communication port)
One CD-ROM drive (3.5" high-density disks provided on request)*
VGA or higher resolution graphics card (SVGA 256-color recommended)
Microsoft Mouse or compatible pointing device

Options:

Audio card/speakers for sound

SETTING UP

Use the following procedure to set up the A-10/A-11 before using it for the first time.

1. Load batteries.
   Load the two alkaline batteries that come with the A-10/A-11 into its main battery holder.
   After loading the main batteries, pull the insulating tape out from under the back-up battery compartment cover.
2. Turn on power.
   Press the power switch to turn on power.
3. Set up the A-10/A-11.
   The welcome wizard appears on the screen after the reset routine is complete. Perform the following procedures in accordance with the guidance messages that appear on the screen.

   Touch screen calibration
   Time and date setting
   Personal data input
   Other settings

REPLACING BATTERIES

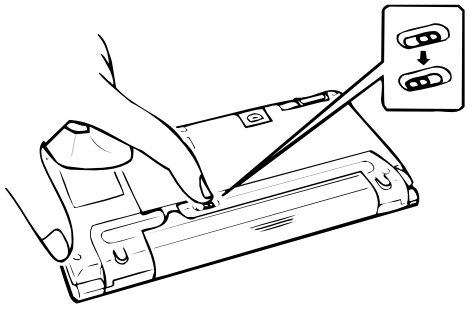
The A-10/A-11 has a dual power supply that consists of main batteries and a back-up battery. Be sure to load the main batteries before using the A-10/A-11 for the first time after purchasing it. Also, replace batteries as soon as possible after they start to lose power.

Important! ⚠

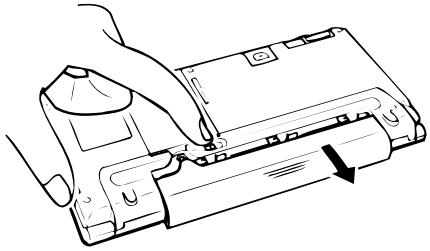
- Never remove both the main batteries and the back-up battery from the A-10/A-11 at the same time. If you do, data stored in memory can be corrupted or lost entirely.
- Use two AA-size alkaline batteries or the optional rechargeable battery pack for the main power supply and a CR2032 lithium battery for the back-up power supply. Never use any other types of batteries with the A-10/A-11.
- Be sure to keep track of the battery life of both the main batteries and the back-up battery. If the batteries being used for both power supplies are low at the same time, data stored in memory can be corrupted or lost entirely.

Replacing the Main Batteries

1. Make sure the A-10/A-11 is turned off.
   If the A-10/A-11 is on, press the power switch to turn it off.
2. Close the A-10/A-11 and turn it over.
3. Slide and hold the battery holder release towards “REPLACE BATTERIES” and then carefully slide the main battery compartment from the A-10/A-11.

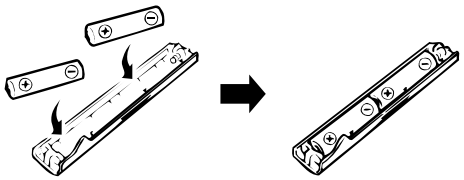


Note that the main battery holder release actually consists of two separate buttons. Slide and hold both of them towards “REPLACE BATTERIES”.

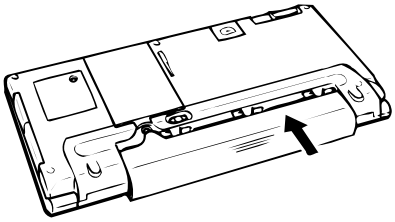


Grasp the center of the main battery holder when you slide it from the A-10/A-11.

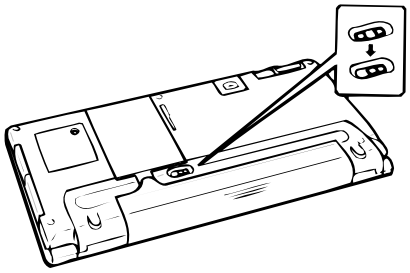
4. Remove both of the old batteries from the main battery holder, and load two new ones.
   When loading new batteries, make sure that their positive (+) and negative (–) ends are facing correctly.



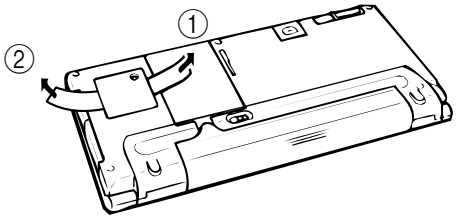
5. Insert the main battery holder into the A-10/A-11 until the holder is fully seated.



6. Slide the release (both buttons) of the main battery holder towards “NORMAL OPERATION” to lock the main battery holder release.



7. If you are loading batteries into the A-10/A-11 for the first time after purchasing it, pull the insulating tape out from under the back-up battery compartment cover according to the following order.



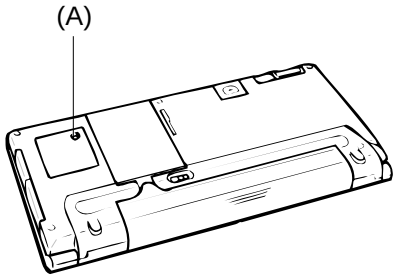
Replacing the Back-up Battery

Important! ⚠

- Never remove both the main batteries and the back-up battery from the A-10/A-11 at the same time. If you do, data stored in memory can be corrupted or lost entirely.

A back-up battery comes installed in the A-10/A-11 when you purchase it. Be sure to replace the back-up battery as soon as possible after it shows signs of low power.

1. Make sure the A-10/A-11 is turned off.
   If the A-10/A-11 is on, press the power switch to turn it off.
2. Close the A-10/A-11 and turn it over.
3. Remove screw A and then remove the back-up battery compartment cover.



4. Remove the old battery.
5. Wipe the surfaces of the new battery with a soft cloth, and then load it into the back-up battery compartment with the + side facing up (so you can see it).
6. Replace the back-up battery compartment cover and secure it in place with its screw.

Important! ⚠

Battery Precautions

Improper handling of batteries create the danger of fire or personal injury, as well as damage to and malfunction of the A-10/A-11. Be sure to observe the following important precautions.

- Always make sure the polarity (+ and – directions) of a battery is correct when you load it into the A-10/A-11.
- Never mix old batteries with new ones.
- Never mix batteries of different types.
- Use only the types of batteries specified in this manual.

Optional Battery Pack

Main power can also be supplied to the A-10/A-11 using a rechargeable battery pack that is available as an option. Charging of the optional battery pack is performed using an optional charger.

RESETTING THE A-10/A-11

You should reset the A-10/A-11 whenever you suspect some external abnormality has caused it to malfunction.

Normal Reset

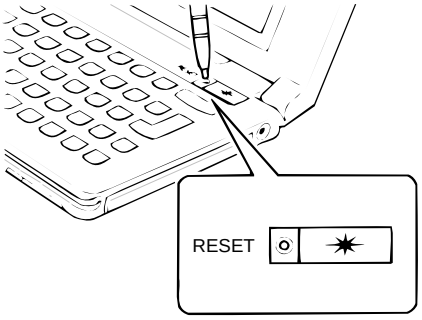
Performing the reset operation when the A-10/A-11 is hung up or experiencing other operational problems but no corruption of memory contents resets the A-10/A-11 without affecting memory contents or settings. A normal reset causes the Desktop to appear on the screen.

Memory Reset

Performing the reset operation after memory data has been corrupted clears memory contents and settings, and causes the welcome wizard screen to appear. Set up the A-10/A-11 in accordance with the on-screen guidance.

To reset the A-10/A-11

1. Press the power switch to turn on the A-10/A-11.
2. Use the stylus to press the reset button.



   This causes the A-10/A-11 to turn off.

Important! ⚠

- Always use the stylus that comes with the A-10/A-11 whenever performing any touch screen operation. Using any other object can result in damage to and malfunction of the A-10/A-11.

3. Turn the A-10/A-11 back on to resume the reset operation.

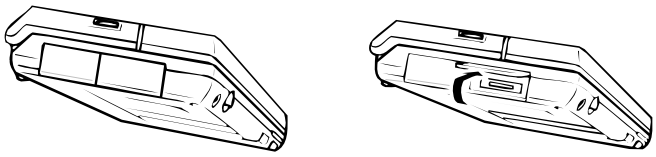
CONNECTING THE A-10/A-11 TO A DESKTOP COMPUTER

Use the following procedure to connect the A-10/A-11 to a desktop computer.

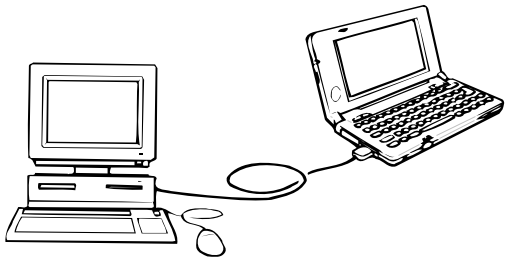
Requirements

Installation CD-ROM (supplied with A-10/A-11)
RS-232C cable (supplied with A-10/A-11)
Desktop computer (see page 6 for minimum requirements)

1. Open the RS-232C connector cover of the A-10/A-11.
   Pull out the bottom of the cover and swing it up. Next slide the cover into the side of the A-10/A-11.



2. Use the RS-232C cable to connect the A-10/A-11 to your desktop computer.
   The RS-232C cable has a 16-pin connector on one end for connection to the A-10/A-11, and a 9-pin connector on the other end for connection to your desktop computer.



CONNECTING TO EXTERNAL EQUIPMENT

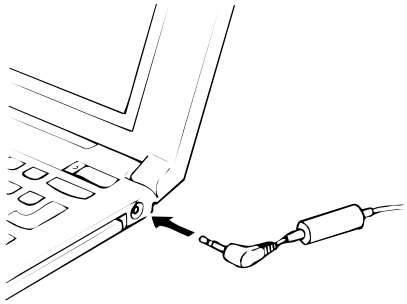
You can connect the A-10/A-11 to a digital camera or other external equipment and exchange data.

Requirements

Optional data communication cable (SB-62)

To connect to external equipment, complete the following steps.

1. Turn off the A-10/A-11 and the external equipment.
2. Connect the data communication cable to the A-10/A-11's data communication jack and the external equipment.

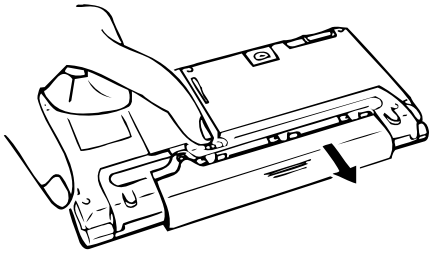


REPLACING MEMORY SLOT

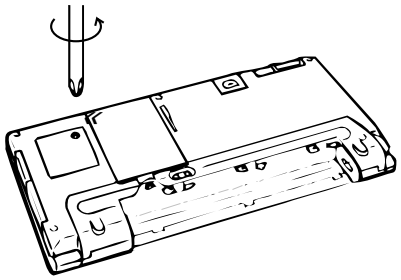
The memory slot of A-10/A-11 carries system ROM. When you replace it, the following steps must be followed.

Note: Be sure to remove main and back-up batteries first and then replace the memory slot. Replacement of the memory slot remaining batteries makes the electrical parts inside A-10/A-11 be defective.

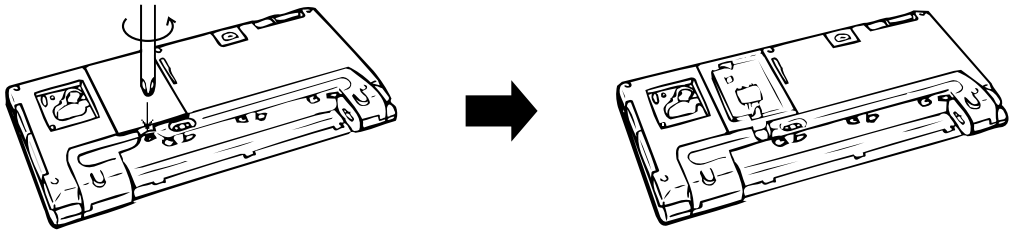
1. Make sure the A-10/A-11 is turned off.
2. Remove the main batteries according to the chapter “REPLACING THE BATTERIES”.



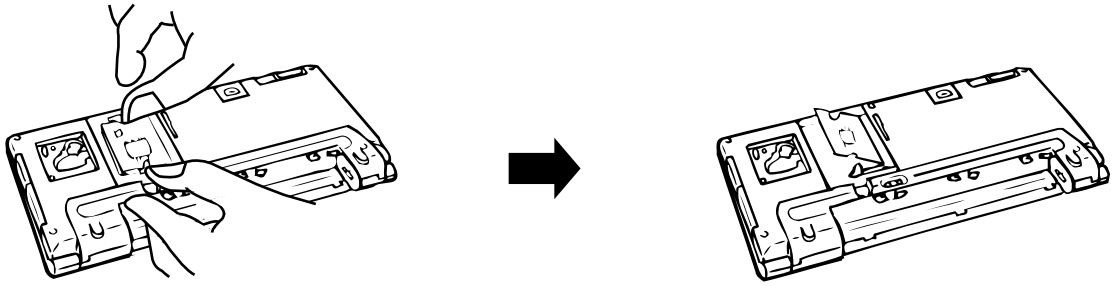
3. Remove the back-up batteries according to the chapter “REPLACING THE BATTERIES”.



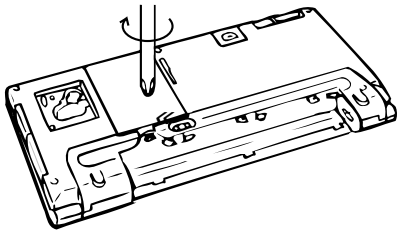
4. Remove a screw and then remove the memory slot cover.



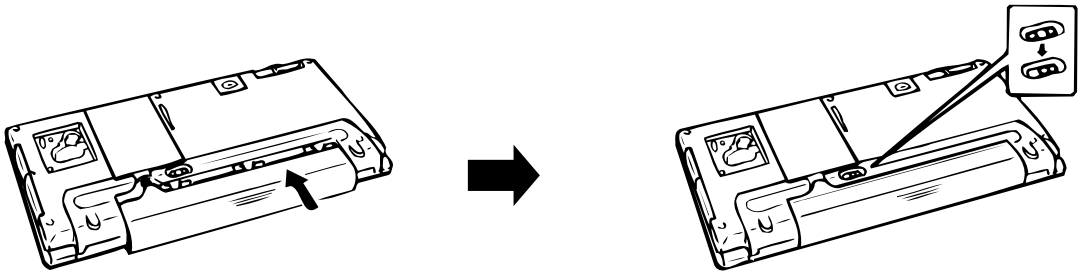
5. Put the slot guide to outside, the memory slot goes up. Then remove the memory slot and insert new one.



6. Replace the memory slot cover and secure it in place with its screw.



7. Insert the main battery holder into the A-10/A-11 until the holder is fully seated. And slide the release (both buttons) of the main battery holder towards “NORMAL OPERATION” to lock the main battery holder release.



8. Press ON button and confirm the Welcome wizard appears.

9. Press OFF button.

10. Load the backup battery and replace the backup battery compartment cover and secure it in place with its screw.

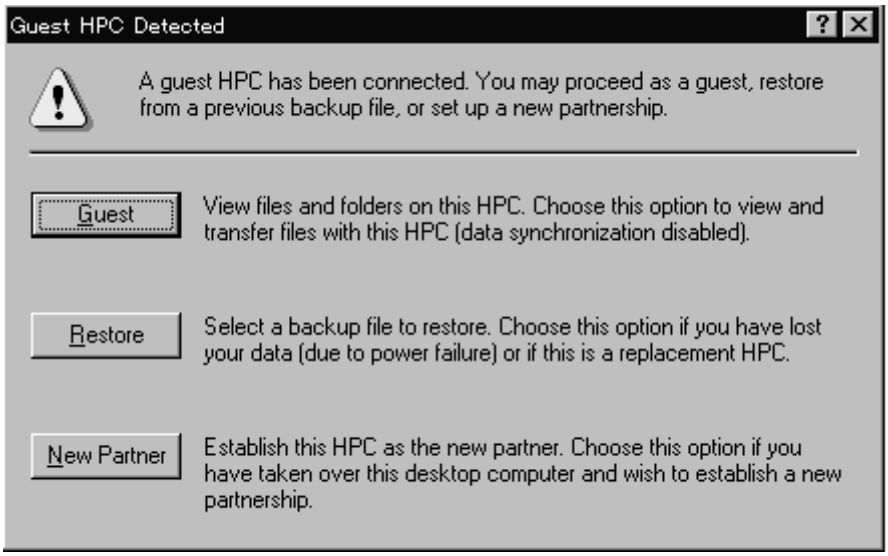
MEMORY BACKUP / RESTORE

Make the backup copy by HPC Explorer to your PC before repairing A-10/A-11, and restore the data from PC to user's A-10/A-11 after repairing.
For the details of Backup/Restore, refer to the operation manual of HPC Explorer.

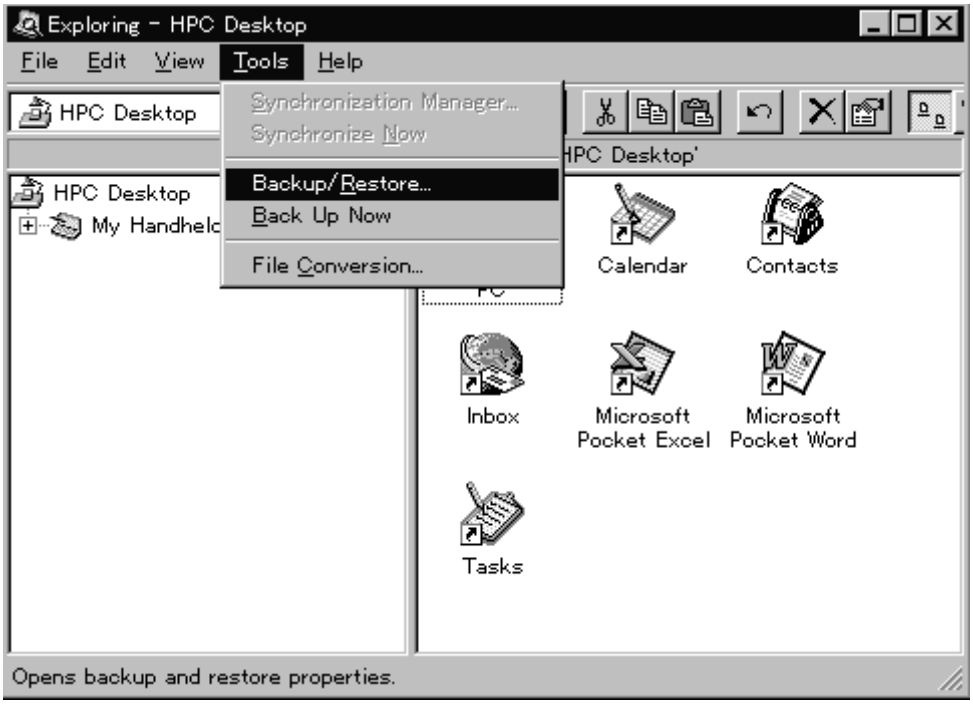
Notes: 1* Backup program of HPC Explorer back up only files and databases. Setup data including Owner, World Clock and so on, can not be backed up to PC.
2* Use AC adaptor when making backup copy and restoring.

Backup

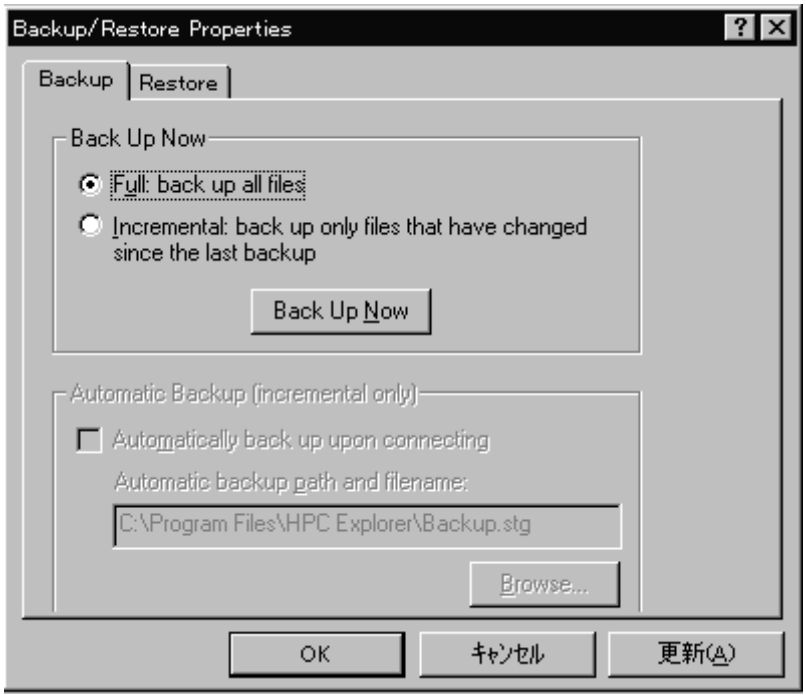
1. Connect user's A-10/A-11 to your PC with RS-232C cable.
2. Start HPC Explorer on your PC.
3. HPC Explorer detects A-10/A-11 is connected automatically.
4. PC shows the following dialog and click "Guest".


Guest HPC Detected
A guest HPC has been connected. You may proceed as a guest, restore from a previous backup file, or set up a new partnership.
Guest
View files and folders on this HPC. Choose this option to view and transfer files with this HPC (data synchronization disabled).
Restore
Select a backup file to restore. Choose this option if you have lost your data (due to power failure) or if this is a replacement HPC.
New Partner
Establish this HPC as the new partner. Choose this option if you have taken over this desktop computer and wish to establish a new partnership.

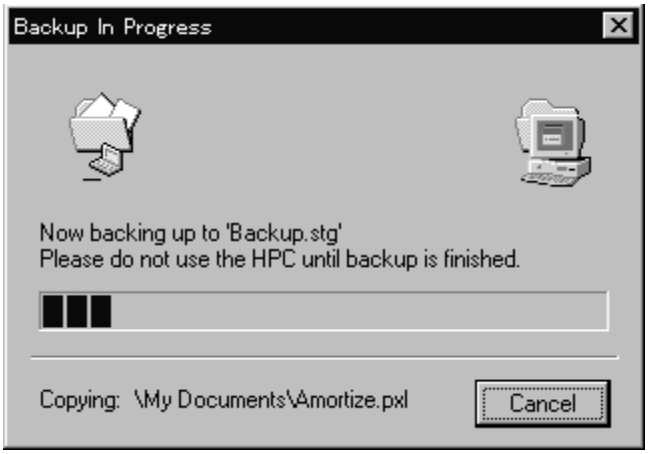
5. Click "Tool" menu and "Backup/Restore...".

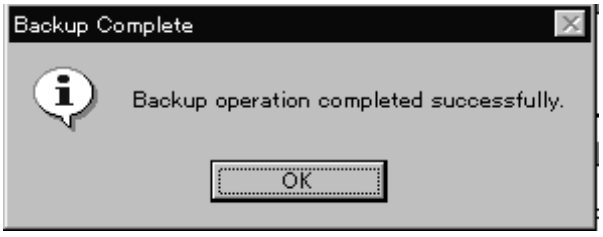


6. Click “Full: back up all files” and “Back Up Now”.



7. Confirm the file name of bakup copy and then click “OK”. Backup starts.

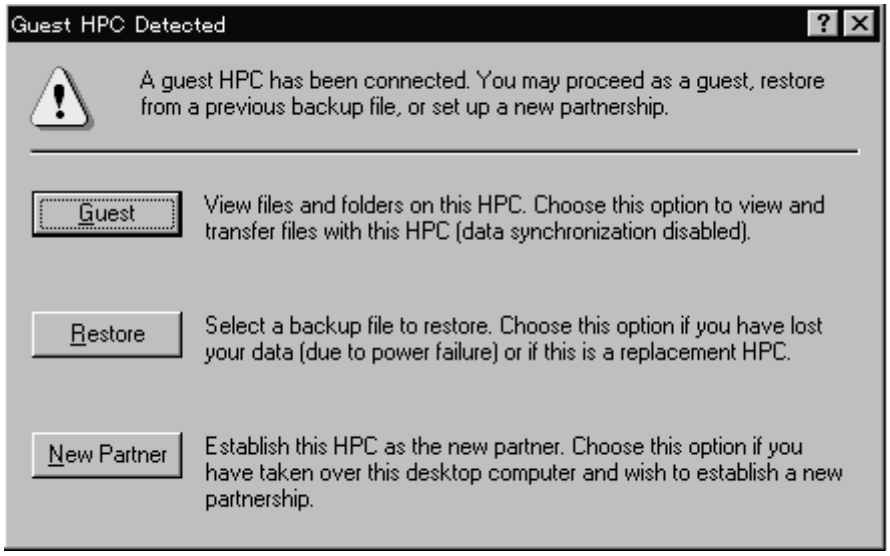

Backup In Progress
Now backing up to 'Backup.stg'
Please do not use the HPC until backup is finished.
Copying: \My Documents\Amortize.pxl
Cancel



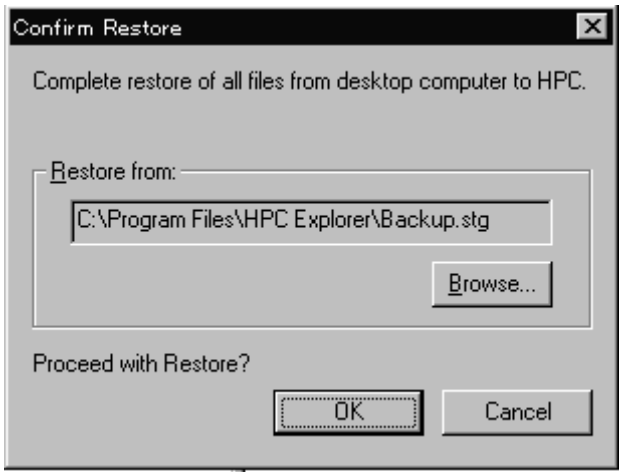
Restore

Execute Restore after repairing.

1. Turn on the user's A-10/A-11 and then Welcome wizard appears.
2. Execute touch panel calibration and then skip other setups after calibration.
3. Connect repaired A-10/A-11 to your PC with RS-232C cable.
4. Start HPC Explorer on your PC.


Guest HPC Detected
A guest HPC has been connected. You may proceed as a guest, restore from a previous backup file, or set up a new partnership.
Guest
View files and folders on this HPC. Choose this option to view and transfer files with this HPC (data synchronization disabled).
Restore
Select a backup file to restore. Choose this option if you have lost your data (due to power failure) or if this is a replacement HPC.
New Partner
Establish this HPC as the new partner. Choose this option if you have taken over this desktop computer and wish to establish a new partnership.

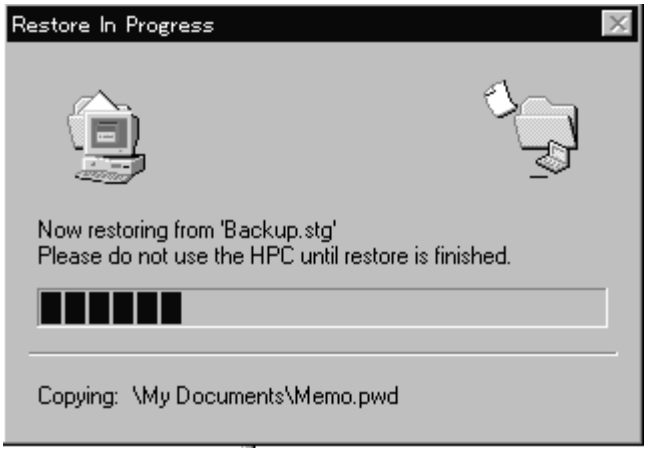
5. Click "Restore" and confirm the file name backuped. Then click "OK".



6. Click "Restore".

Proceed with Restore ?
Restore will remove all current data from your HPC. Your data will be returned to the state it was in when you last backed up.
Note: you may not cancel restore after it has been started.
Proceed with restore ?
Cancel
Restore

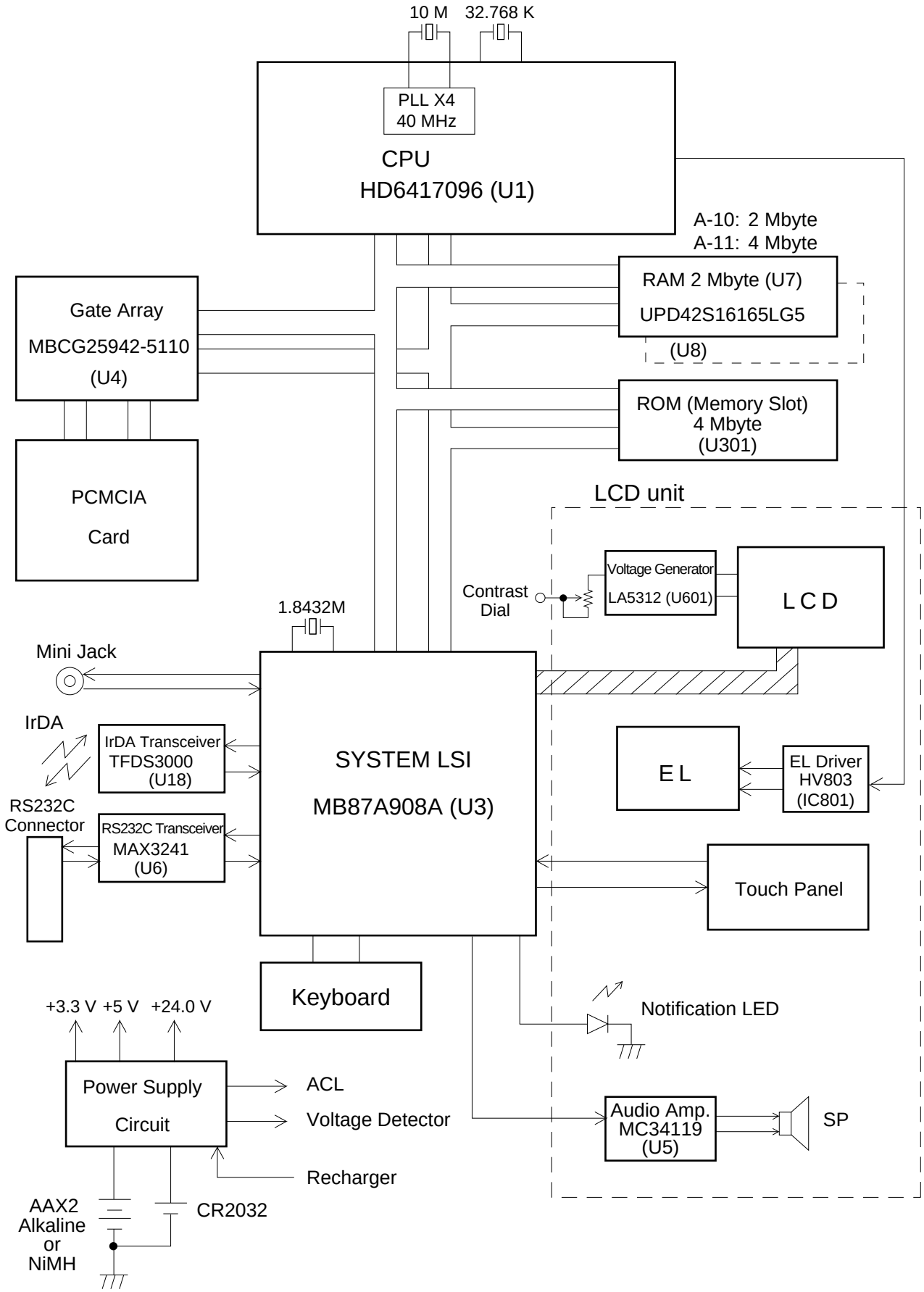
7. Restoring starts.


Restore In Progress
Now restoring from 'Backup.stg'
Please do not use the HPC until restore is finished.
Copying: \My Documents\Memo.pwd

8. Click “OK”.

Restore Complete: Restart HPC
Restore complete. You must disconnect and then reset your HPC for these changes to take effect.
Consult your User's Guide for instructions for resetting your HPC.
Note: When you reconnect, Synchronization Manager may prompt you to combine or discard items in any synchronized databases (Appointments, Contacts, or Tasks).
OK

BLOCK DIAGRAM



DEVICE FEATURES

Item	Features
CPU	**HD6417096 (U1)** Hitachi 32 bit RISC CPU. Sleep/Standby Power Mode. 8 kbytes Cash. Interrupt Controller. User Break Controller. Bus State Controller 2 kbytes Mask ROM ON Controller 1 ch Serial I/F. 1 ch Serial I/F with 16 bytes FIFO.
System RAM	**μPD42S16165LG5 (U7, U8)** 2 or 4 Mbytes DRAM (16 Mbit DRAM 4 k refresh)
ROM	4 Mbytes Mask ROM (32 bit Mask ROM)
Memory Slot	**Z305-MMR PCB** Connects to memory board with ROM. This connects a development board as well.
System LSI	**MB87A908A (U3)** LCD Controller System Controller DRAM Access Controller Interrupt Controller Key Controller Audio Controller DMA Controller Touch Panel Controller Infra Red Controller RS232C I/F Controller IrDA I/F Controller 3-pin I/F Controller LED Controller
Gate Array	**MBCG25942-5110 (U4)** PCMCIA Controller
LCD	4 gray levels 480 × 240, landscape 0.24 mm/pitch
LCD Driver	2 × 120 ch common driver. 3 × 160 ch segment driver.
Touch Panel	Resistive input device at the screen pixel resolution. Just fitting to LCD panel. Controller in System LSI.
Touch Panel A/D	10 bit A/D in System LSI.
Audio D/A	10 bit D/A in System LSI. 8/11.025/22.05 kHz sampling.

Item	Features
Speaker	20 mm dynamic type
PCMCIA	Type II +5 V PCMCIA 2.0
Card Lock Switch	Detects both lock and unlock
IrDA / RS232C (alternative)	Serial I/F with 16 byte FIFO in CPU. 115.2 kbaud IrDA 0 - 1 m 9-pin RS232C ±12 V I/F
RS232C PC Cable	Connects to PC RS232C
3-pin Serial Port	Serial I/F in CPU 19.2 kbaud 0 to +5 V I/F
Notification LED	LED Controller in System LSI.
Notification Button	Independent switch. It wakes CPU up.
LCD Contrast	Rotary switch
Keyboard	56 keys and independent “Ctrl”,“Alt”,“Right Shift”,“Left Shift”, and “Windows”. “ON” key is an independent switch.
Cradle Detector	Detects whether system is in the cradle or not.
ACL	Automatic hard reset for first time. “Power ON Reset” occurs in case of ACL.
Battery Cover Detector	Detects both open and closed.
Battery Detector	Detects Alkaline or NiMH.
Voltage Detector	5 levels with Alkaline / NiMH and 1 level with backup battery.
Battery	Alkaline AA × 2 NiMH AC adapter
Power Supply	3.3 V PCMCIA, 3-pin: 5 V LCD: 24 V

LSI/IC DATA

MB87A908A (SYSTEM LSI / U3)

No.	Pin Name	In/Out	Pull-Up/Down	Function	To/From
1	VDET3B	I		Battery detecting signal (Off)	Q52 (Detector)
2	VDETS	I		Backup battery detecting signal (Message)	Q37 (Detector)
4	VDET2R	I		NiMH detecting signal (Off)	Q2 (Detector)
5	A1	I/O	Down	Address	
6	A2	I/O	Down	Address	
7	A3	I/O	Down	Address	
8	A4	I/O	Down	Address	
9	A5	I/O	Down	Address	
10	A6	I/O	Down	Address	
11	A7	I/O	Down	Address	
13	A8	I/O	Down	Address	
14	A9	I/O	Down	Address	
15	A10	I/O	Down	Address	
16	A11	I/O	Down	Address	
17	A12	I/O	Down	Address	
18	A20	I/O	Down	Address	
19	A21	I	Down	Address	
20	A22	I	Down	Address	
21	A23	I	Down	Address	
23	A24	I	Down	Address	
24	A25	I	Down	Address	
25	PCMIREQB	I		Interrupt signal to PCMCIA	GA
26	PCMWAKEB	I		Wake-up signal to PCMCIA	GA
27	CE0ROMB	O		Chip select	ROM
28	CE1ROMB	O		Chip select	ROM
29	OEROMB	O		Output enable	ROM
30	FlSHRTB	O		Reset signal for Flash	
31	PRESETB	O		Reset signal	GA
33	CASLHB	I		CASLH signal to CPU	CPU
34	CASLLB	I/O		CASLL/OE signal from CPU	CPU
35	RASB	I/O		RAS/CE signal for CPU	CPU
36	RDB	I	Up	Read signal from CPU	CPU
37	WRHB	I/O	Up	WE1 signal from CPU	CPU
38	WRLB	I/O	Up	WE0 signal from CPU	CPU
39	RDWRB	I/O	Up	RD/WRB signal from CPU	CPU
40	CS0B	I	Up	CS0 signal from CPU (ROM)	CPU
41	CS4B	I	Up	CS4 signal from CPU (SYSTEM LSI)	CPU
42	TEST1	I		Test pin	
43	TEST2	I		Test pin	
44	TEST3	I		Test pin	
45	D0	I/O	Down	Data bus	
46	D1	I/O	Down	Data bus	
48	D2	I/O	Down	Data bus	
49	D3	I/O	Down	Data bus	
50	D4	I/O	Down	Data bus	
51	D5	I/O	Down	Data bus	
52	D6	I/O	Down	Data bus	
53	D7	I/O	Down	Data bus	
54	D8	I/O	Down	Data bus	
55	D9	I/O	Down	Data bus	
57	D10	I/O	Down	Data bus	
58	D11	I/O	Down	Data bus	
59	D12	I/O	Down	Data bus	
60	D13	I/O	Down	Data bus	
61	D14	I/O	Down	Data bus	
62	D15	I/O	Down	Data bus	
63	CAS0LB	O		CAS signal for DRAM	DRAM

No.	Pin Name	In/Out	Pull-Up/Down	Function	To/From
64	CAS0UB	O		CAS signal for DRAM	DRAM
65	CAS1LB	O		CAS signal for DRAM	DRAM
67	CAS1UB	O		CAS signal for DRAM	DRAM
68	CAS2LB	O		CAS signal for DRAM	DRAM
69	CAS2UB	O		CAS signal for DRAM	DRAM
70	CHKPRGB	I		Port	Pad
71	LEDOFFB	I		LED cancel signal	SW10
72	IRQB	O		IRQ0 signal to CPU	CPU
73	NMI	O		NMI signal to CPU	CPU
74	STATUS0	I		STATUS0 signal from CPU	CPU
75	CKRTC256	I		RTCCLK signal from CPU	CPU
77	MCLOCK	I		CKI0 signal from CPU	CPU
78	BACKB	I		BACK signal from CPU	CPU
79	ONB	O		ON signal	CPU
80	RESETB	O		RESET signal to CPU	CPU
81	ONENB	O		ONEN signal to CPU	CPU
82	BREQB	O		REQ signl to CPU	CPU
83	SCK	O		SCK1 signal to CPU	CPU
84	FUNKEYIN4	I	Up	Function input	Kyboard
85	FUNKEYIN3	I	Up	Function input	Kyboard
87	FUNKEYIN2	I	Up	Function input	Kyboard
88	FUNKEYIN1	I	Up	Function input	Kyboard
89	FUNKEYIN0	I	Up	Function input	Kyboard
90	ONSTATUSB	I		ONSTATUSB signal from CPU	CPU
92	KBOUT8	O		Key common signal	Keyboard
93	KBOUT7	O		Key common signal	Keyboard
94	KBOUT6	O		Key common signal	Keyboard
95	KBOUT5	O		Key common signal	Keyboard
96	KBOUT4	O		Key common signal	Keyboard
97	KBOUT3	O		Key common signal	Keyboard
98	KBOUT2	O		Key common signal	Keyboard
99	KBOUT1	O		Key common signal	Keyboard
101	XCKOUT	I/O		Oscillator output	Y3
102	XCKIN	I		Oscillator inut	Y3
103	BATDTCT	I		Alkaline/NiMH detecting port	SW3
104	KBOUT0	O		Key common signal	Keyboard
105	KBDIN0	I	Up	Key segment signal	Keyboard
106	KBDIN1	I	Up	Key segment signal	Keyboard
107	KBDIN2	I	Up	Key segment signal	Keyboard
108	KBDIN3	I	Up	Key segment signal	Keyboard
109	KBDIN4	I	Up	Key segment signal	Keyboard
111	KBDIN5	I	Up	Key segment signal	Keyboard
112	KBDIN6	I	Up	Key segment signal	Keyboard
113	KBDIN7	I	Up	Key segment signal	Keyboard
114	ONSWB	I	Up	ON switch signal	ON
115	MEMCLB	I		Memory clear signal	RESET
116	LOCK	I		PCMCIA lock switch	SW1
117	DOCKB	I		Cradle detector	Detector (Q18)
118	BCVRB	I		Battery cover detecting port	SW2
119	ACDTCTB	I	Up	AC adaptor detect	RS232C
121	AVCC2	I		+3V source for Touch panel	
122	TCPVRH	I		Reference voltage for A/D converter of TP	Touch panel
123	TCPVRL	I		Reference voltage for A/D converter of TP	Touch panel
124	VDETADIN	I		Power detecting signal	Power
125	TCPIN2	I		Analog signal input from TP	Touch panel

No.	Pin Name	In/Out	Pull-Up/Down	Function	To/From
126	TCPIN1	I		Analog signal input from TP	Touch panel
127	AGND	I		Analog ground	
128	AUDVRL	I		Reference voltage for A/D,D/A converter	
129	AUDVRH	I		Reference voltage for A/D,D/A converter	
130	AUDOUT	O		Audio signal output for play	U5 (Amp.)
131	AUDIN	I	Down	Audio signal inout for record	
132	AVCC1	I		+3 V source for audio	
133	NC				
134	FLSHWEB	O		Write signal for Flash	
136	LEDONB	O		LED signal	LEDs
137	PENPUTB	I		Pen down status signal	Touch panel
138	PSW0	O		Touch panel control	Touch panel
139	PSW1	O		Touch panel control	Touch panel
140	PSW2	O		Touch panel control	Touch panel
141	PSW3	O		Touch panel control	Touch panel
142	PSW4	O		Touch panel control	Touch panel
143	PORT4	O		Open	
145	FLM	O		First line marker	LCD
146	CL1	O		Clock for LCD	LCD
147	CL2	O		Clock for LCD	LCD
148	M	O		Alternating signal for LCD	LCD
149	DISPOFFB	O		LCD off signal	LCD
150	DU0	O		Data for LCD	LCD
151	DU1	O		Data for LCD	LCD
152	DU2	O		Data for LCD	LCD
153	DU3	O		Data for LCD	LCD
155	IRRXD	I		Infrared input	IrDA
156	PIRB	O		Voltage V5IRDA(+3 V) control	Q16 (Power)
157	IRTXD	O		Infrared output	IrDA
158	MDCD	I		RS232C control	RS232C
159	MDTR	O		RS232C control	RS232C
160	RXDSH	I/O		RXD1 signal for CPU	CPU,232C
161	TXDSH	I		TXD1 signal from CPU	CPU
162	TYPEA	I		Reserved	
163	ACLB	I		ACL signal at battery loaded.	U9 (Power)
165	MODE380	I		Reserved	
166	PCRD	O		Voltage V5CARD(+5 V) control	Q10 (Power)
167	PLCDB	O		Voltage V25LCD(+25 V) control	Q32 (Power)
168	PPLYB	O		P17	
169	PRECB	O		Open	
170	P5V	O		Control signal for V5SYS	Q11 (Power)
171	P5VRB	O		DC-DC(U20) control signal	U20
172	PDMMYM	O		V3 system control	Q48 (Power)
173	PDMMYS	O		For backup battery detector	U10 (Detector)
175	VDET1B	I		Alkaline battery detecting signal (Message)	U12 (Detector)
176	VDET2	I		Alkaline battery detecting signal (Off)	Q1 (Detector)

MBCG25942-5110 (GATE ARRAY / U4)

No.	Pin Name	In/Out	Pull-Up/Down	3V/5V	Function	To/From
1	VDD1	I		5 V	+5 V source	Power
2	V5WEB	O		5 V	Write signal	Card
3	V5A20	O		5 V	Address	Card
4	BSYB	I		5 V	Busy ready	Card
5	V5A21	O		5 V	Address	Card
6	V5A16	O		5 V	Address	Card
7	V5A22	O		5 V	Address	Card
8	V5A15	O		5 V	Address	Card
10	V5A23	O		5 V	Address	Card
11	V5A12	O		5 V	Address	Card
12	V5A24	O		5 V	Address	Card
13	V5A7	O		5 V	Address	Card
14	V5A25	O		5 V	Address	Card
15	V5A6	O		5 V	Address	Card
16	V5A5	O		5 V	Address	Card
17	ICIORDB	I	Up	3 V	I/O read signal	CPU
20	RESET	O		5 V	Reset signal	Card
21	V5A4	O		5 V	Address	Card
22	V5A3	O		5 V	Address	Card
23	INPACKB	I		5 V	Input response	Card
24	V5A2	O		5 V	Address	Card
25	REGB	O		5 V	Attribute memory select	Card
26	V5A1	O		5 V	Address	Card
27	BVD2	I		5 V	Battery detect	Card
28	V5A0	O		5 V	Address	Card
29	BVD1	I		5 V	Battery Detector	Card
31	CD2B	I		5 V	Card detect	Card
32	V5D8	I/O		5 V	Data	Card
33	V5D1	I/O		5 V	Data	Card
34	V5D9	I/O		5 V	Data	Card
35	V5D2	I/O		5 V	Data	Card
36	V5D10	I/O		5 V	Data	Card
38	MDCD	O		3 V	Port	
39	D15	I/O		3 V	Data	CPU
40	D14	I/O		3 V	Data	CPU
41	D13	I/O		3 V	Data	CPU
42	D12	I/O		3 V	Data	CPU
43	D11	I/O		3 V	Data	CPU
44	D10	I/O		3 V	Data	CPU
46	V5WAITB	I		5 V	Wait signal	Card
47	D9	I/O		3 V	Data	CPU
48	D8	I/O		3 V	Data	CPU
49	D7	I/O		3 V	Data	CPU
50	D6	I/O		3 V	Data	CPU
51	D5	I/O		3 V	Data	CPU
52	D4	I/O		3 V	Data	CPU
53	D3	I/O		3 V	Data	CPU
56	D2	I/O		3 V	Data	CPU
57	D1	I/O		3 V	Data	CPU
58	D0	I/O		3 V	Data	CPU
59	CS6B	I	Up	3 V	Chip select	CPU
60	CE2B	I	Up	3 V	Chip enable	CPU
61	RDB	I		3 V	Output enable	CPU
62	WAITB	O		3 V	Wait signal	CPU
63	WRHB	I		3 V	Write signal	CPU
64	V5D0	I/O		5 V	Data	Card
67	MODE	I		3 V	Port	
68	RDWRB	I		3 V	Read/Write signal	CPU
69	IOIS16B	O		3 V	Write protect	CPU
70	TXDSH	I		3 V	TXD1 signal for CPU	CPU

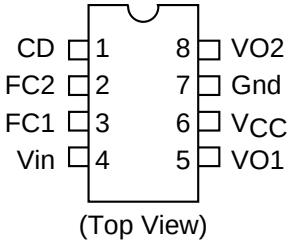
No.	Pin Name	In/Out	Pull-Up/Down	3V/5V	Function	To/From
71	RXDSH	O		3 V	RXD1 signal from CPU	CPU
72	CS4B	I		3 V	Chip select	CPU
74	PCMWAKEB	O		3 V	PCMCIA wake-up signal	SYSTEM LSI
75	PCMIRQB	O		3 V	Interrupt signal for PCMCIA	SYSTEM LSI
76	A24	I		3 V	Address	CPU
77	A23	I		3 V	Address	CPU
78	A22	I		3 V	Address	CPU
79	A21	I		3 V	Address	CPU
80	RESETB	I		3 V	RESETB signal	SYSTEM LSI
82	V5IOIS16B	I		5 V	Write protect signal	Card
83	A20	I		3 V	Address	CPU
84	A19	I	Down	3 V	Address	CPU
85	A18	I	Down	3 V	Address	CPU
86	A17	I	Down	3 V	Address	CPU
87	A16	I	Down	3 V	Address	CPU
88	A15	I	Down	3 V	Address	CPU
89	A14	I	Down	3 V	Address	CPU
92	MCLOCK	I		3 V	Clock	CPU
93	BREQB	I		3 V	BREQB signal	SYSTEM LSI
94	A13	I	Down	3 V	Address	CPU
95	A12	I		3 V	Address	CPU
96	A11	I		3 V	Address	CPU
97	A10	I		3 V	Address	CPU
98	A9	I		3 V	Address	CPU
99	A8	I		3 V	Address	CPU
100	A7	I		3 V	Address	CPU
101	A6	I		3 V	Address	CPU
103	A5	I		3 V	Address	CPU
104	A4	I		3 V	Address	CPU
105	A3	I		3 V	Address	CPU
106	A2	I		3 V	Address	CPU
107	A1	I		3 V	Address	CPU
108	A0	I	Down	3 V	Address	CPU
110	SIFENB	O		3 V	9-pin RXD1 control	RS232C
111	SIFSHUTB	O		3 V	RXD1 signal for CPU	CPU
112	RXD3	I		5 V	3-pin RXD signal	Serial
113	TXD3B	O		5 V	3-pin TXD signal	Serial
114	V5A19	O		5 V	Address	Card
115	V5A14	O		5 V	Address	Card
116	V5A18	O		5 V	Address	Card
118	V5A13	O		5 V	Address	Card
119	V5A17	O		5 V	Address	Card
120	V5A8	O		5 V	Address	Card
121	V5IOWRB	O		5 V	I/O write signal	Card
122	V5A9	O		5 V	Address	Card
123	V5A11	O		5 V	Address	Card
124	V5A10	O		5 V	Address	Card
125	ICIOWRB	I	Up	3 V	I/O write signal	CPU
128	V5D15	I/O		5 V	Data	Card
129	V5CE1B	O		5 V	Chip enable	Card
130	V5D14	I/O		5 V	Data	Card
131	V5D7	I/O		5 V	Data	Card
132	V5IORDB	O		5 V	I/O read signal	Card
133	V5D13	I/O		5 V	Data	Card
134	CD1B	I		5 V	Card detect	Card
135	V5D6	I/O		5 V	Data	Card
136	V5D12	I/O		5 V	Data	Card
139	V5D5	I/O		5 V	Data	Card
140	V5D11	I/O		5 V	Data	Card
141	V5D4	I/O		5 V	Data	Card
142	V5D3	I/O		5 V	Data	Card
143	V50EB	O		5 V	Output enable signal	Card
144	V5CE2B	O		5 V	Chip enable	Card

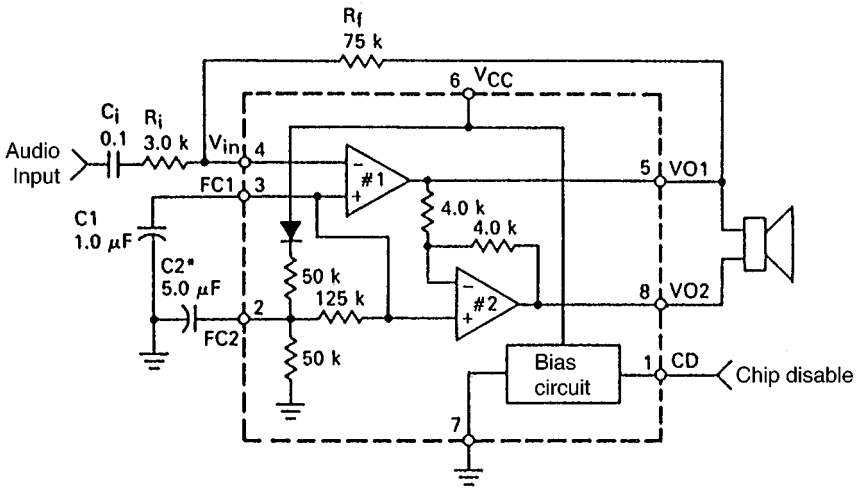
HD6417096: SH3 (CPU / U1)

No	Pin Name	In/Out	Function	To/From
1	SCK1	O	Serial port 1 clock	SYSTEM LSI
2	CTS1	O	Serial port 1 transmission permission	U6(RS232C)
3	RTS1	I	Serial port 1 transmission request	U6(RS232C)
4	TESTMD	I	Test mode control.GND	
5	Port7	I/O	ON/OF contorol for EL (H=EL ON)	Q831(EL block)
8	Port6	I/O	RTS(Request To Send) signal for RS232C	U6(RS232C)
9	Port5	O	CTS(Clear To Send) signal for RS232C	U6(RS232C)
10	Port4	I/O	Audio mute signal	U6(RS232C)
11	Port3	I/O	EPDO signal for PCMCIA	PCMCIA Card
12	Port2	I/O	EPSK signal for PCMCIA	PCMCIA Card
13	Port1	I/O	EPCS signal for PCMCIA	PCMCIA Card
14	Port0	I	Low battery warning signal for Alkaline	U17(Detector)
15	D15	I/O	Data bus	
16	D14	I/O	Data bus	
21	D13	I/O	Data bus	
22	D12	I/O	Data bus	
23	D11	I/O	Data bus	
24	D10	I/O	Data bus	
25	D9	I/O	Data bus	
26	D8	I/O	Data bus	
27	D7	I/O	Data bus	
28	D6	I/O	Data bus	
29	D5	I/O	Data bus	
32	D4	I/O	Data bus	
33	D3	I/O	Data bus	
34	D2	I/O	Data bus	
35	D1	I/O	Data bus	
36	D0	I/O	Data bus	
37	A0	I/O	Address bus	
38	A1	I/O	Address bus	
39	A2	I/O	Address bus	
40	A3	I/O	Address bus	
43	A4	I/O	Address bus	
44	A5	I/O	Address bus	
45	A6	I/O	Address bus	
46	A7	I/O	Address bus	
47	A8	I/O	Address bus	
48	A9	I/O	Address bus	
51	A10	I/O	Address bus	
52	A11	I/O	Address bus	
53	A12	I/O	Address bus	
56	A13	I/O	Address bus	
57	A14	I/O	Address bus	
58	A15	I/O	Address bus	
61	A16	I/O	Address bus	
62	A17	I/O	Address bus	
63	A18	I/O	Address bus	
64	A19	I/O	Address bus	
65	A20	I/O	Address bus	
66	A21	I/O	Address bus	
67	A22	I/O	Address bus	
70	A23	I/O	Address bus	
71	A24	I/O	Address bus	
72	A25	I/O	Address bus	
74	CAP1	O	Capacitor connecting terminal for PLL	
77	ONENB	I	ON circuit enable	SYSTEM LSI
79	EXTAL	I	Oscillator in (10 MHz)	Y2
80	XTAL	O	Oscillator out (10 MHz)	Y2
81	PULLUPB	I	Pullup control	

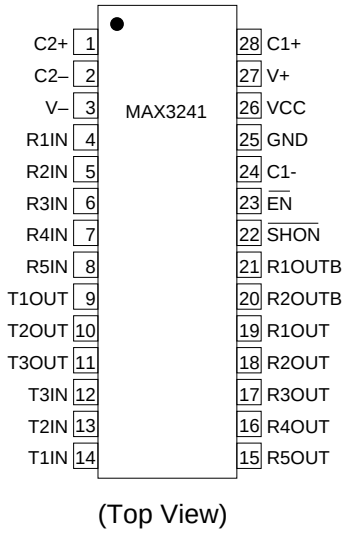
No	Pin Name	In/Out	Function	To/From
84	MD2/RXD	I	Data inout of serial port 0	GA
85	MD1/TXD	O	Data output of serial port 0	GA
86	MD0/SCK	I/O	Clock of serial port 0. Connected to GND	
87	BREQB	I	Bus request	SYSTEM LSI, GA
88	RESETB	I	Reset signal from SYSTEM LSI	SYSTEM LSI, GA
89	NMI	I	Non-maskable Interrupt request	SYSTEM LSI
90	IRL3	I	Interrupt request	SYSTEM LSI
91	IRL2	I	Interrupt request. Connected to +3.3 V	
92	IRL1	I	Interrupt request. Connected to +3.3 V	
93	IRL0	I	Interrupt request. Connected to +3.3 V	
94	IOIS16B	I	Write protect input	GA
95	IRQOUTB	O	Not used	
96	BASKB	O	Bus access permission	SYSTEM LSI
97	STATUS1	O	Not used	
98	STATUS0	O	Bus status	SYSTEM LSI
99	ONSTAUTSB	O	V3ROM (+3.3 V) ON/OFF control. H=ON	SYSTEM LSI,Power
101	CKIO	I/O	System clock I/O	SYSTEM LSI, GA
103	MD4/CE2B	O	Chip enable	GA
104	ONB	I	On circuit start request	SYSTEM LSI
105	BSB	O	Not used	
106	RD/WRB	O	Read / Write signal	SYSTEM LSI, GA
107	RDB	O	Read pulse	SYSTEM LSI, GA
108	CS6B/CE1B	O	Chip select-6 signal	GA
109	CS5B	O	Not used	
110	CS4B	O	Chip select -4 signal	SYSTEM LSI, GA
111	CS3B	O	Not used	
112	CS2B	O	Not used	
113	CS1B	O	Not used	
114	CS0B	O	Chip select -0 signal	SYSTEM LSI, M-slot
117	ICIOWRB	O	Write signal for PCMCIA I/O	GA
118	ICIORDB	O	Read signal for PCMCIA I/O	GA
119	CAS2HB	O	D15~D8 select signals for RAM on Memory slot	
120	CAS2LB	O	D7~D0 select signals	M-slot
123	WE1B	I	D15~D8 select signals	SYSTEM LSI, GA
124	WE0B	I	D7~D0 select signals	SYSTEM LSI, GA
125	CASLHB	I	D15~D8 select signals	SYSTEM LSI
126	CASSLL/OEB	I	D7~D0 select / memory select signal	SYSTEM LSI
129	RAS/CEB	O	CE signal for RAM	SYSTEM LSI
130	MD5/RAS2B	I/O	RAS for DRAM on Memory slot	M-slot
131	STATUS3	O	Not used	
132	SYAYUS2	O	Not used	
134	WAITB	I	Hardware wait request	GA
136	XTAL2	O	Oscillator terminal(for internal RTC)	Y1
137	EXTAL2	I	Oscillator terminal(for internal RTC)	Y1
140	RTCCLK	O	RTC clock output	SYSTEM LSI
141	RTCCLKENB	I	RTC clock output enable. Connected to GND	
142	RXD1	I	Serial port1(232C) data input	SYSTEM LSI, U6
143	TXD1	O	Serial port1(232C) data output	SYSTEM LSI, U6

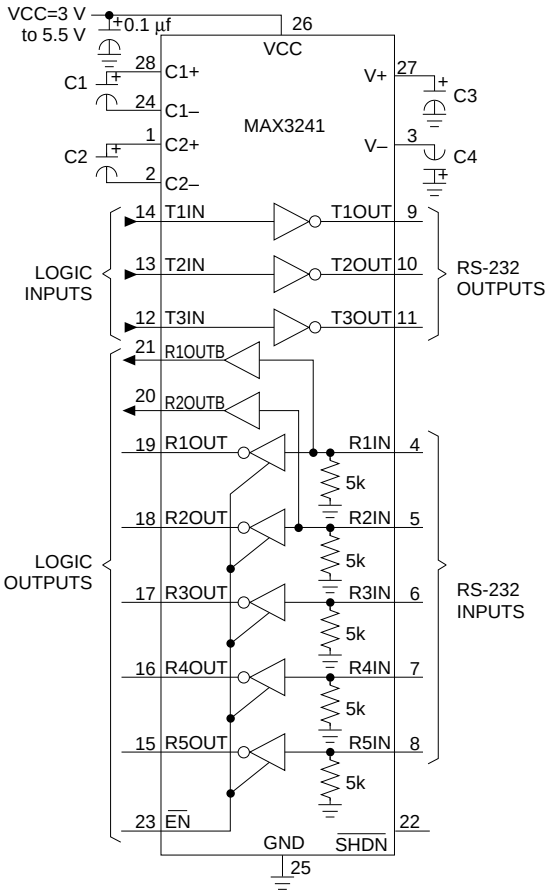
MC34119 (U5)



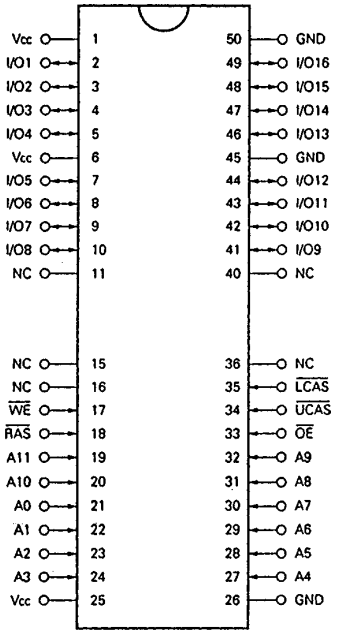


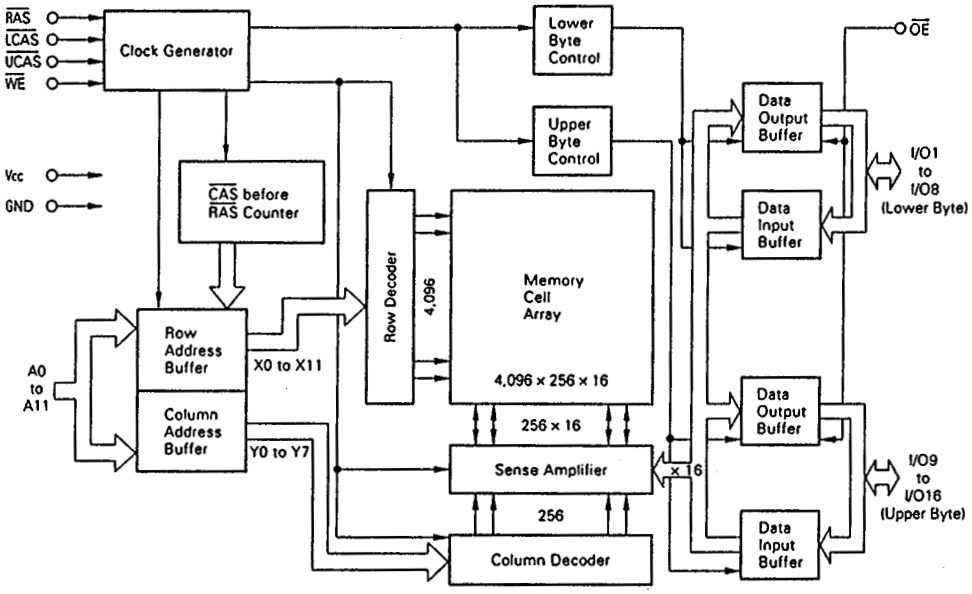
MAX3241CAI (U6)





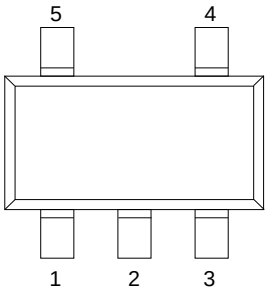
UPD42S16165LG5

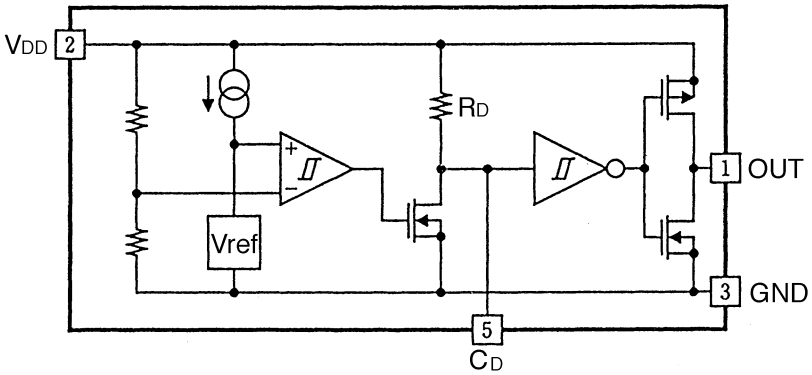




A0 to A11 : Address Inputs
I/O 1 to I/O 16 : Data Inputs/Outputs
$\overline{RAS}$: Row Address Strobe
$\overline{UCAS}$: Column Address Strobe (upper)
$\overline{LCAS}$: Column Address Strobe (lower)
$\overline{WE}$: Write enable
$\overline{OE}$: Output enable
VCC : Power Supply
GND : Ground
NC : No Connection

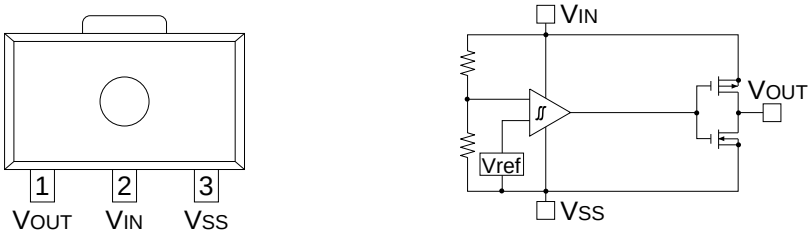
RN5VD18CA (U9)



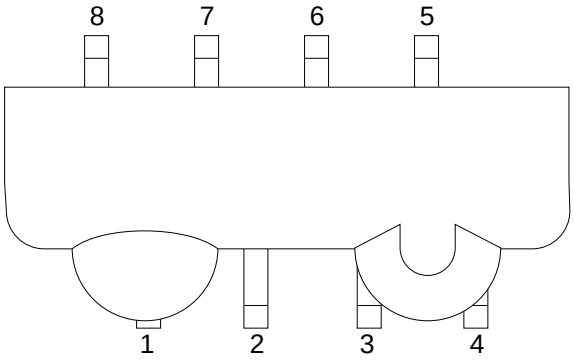


OUT : Output (H=Detected)
VDD : Voltage source
GND : Ground
NC : No connection
CD : Connect to capacitor for delay

XC61A or RH5V Series (U12 ~ 17, U32)

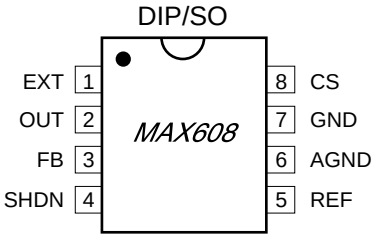


TFDS3000TR3: IrDA Module (U18)



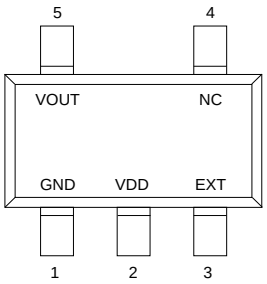
Pin description:
1: IRED Cathode
2: Rxd (Output)
3: Vcc (Supply Voltage)
4: Ground
5: NC*)
6: SD (Shut-down)
7: Txd (Input)
8: IRED Anode

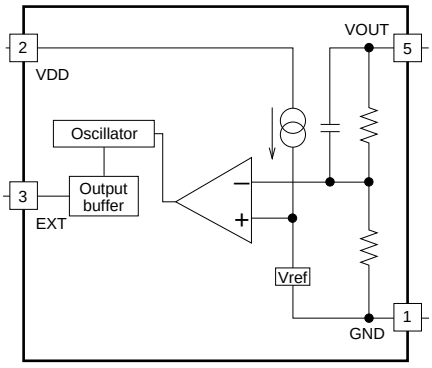
MAX608 (U20, U22)



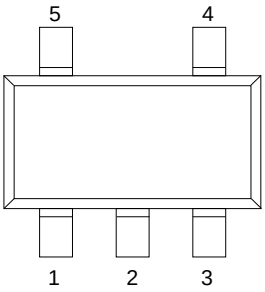
(Top View)

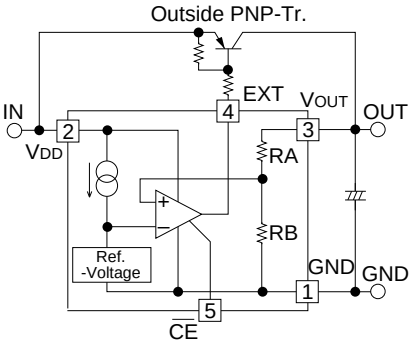
RN5RY Series (U23)



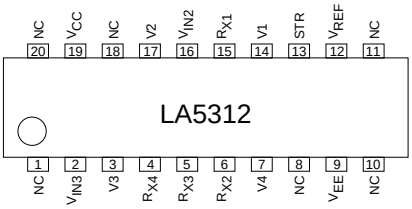


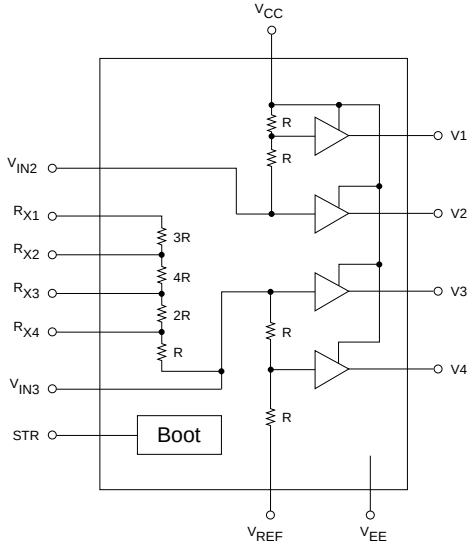
RN5RG Series (U26)



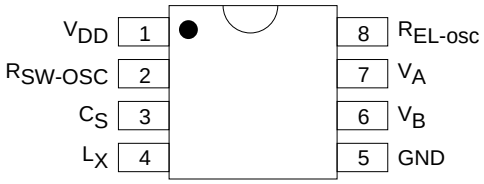


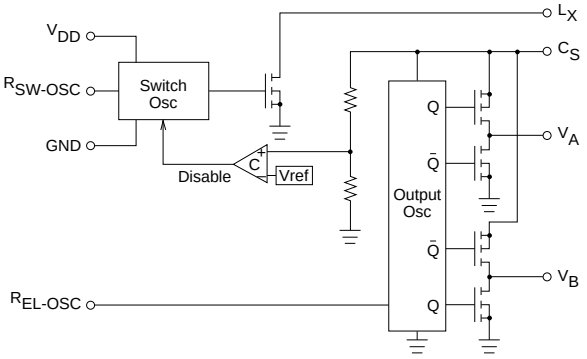
LA5312V (U601)



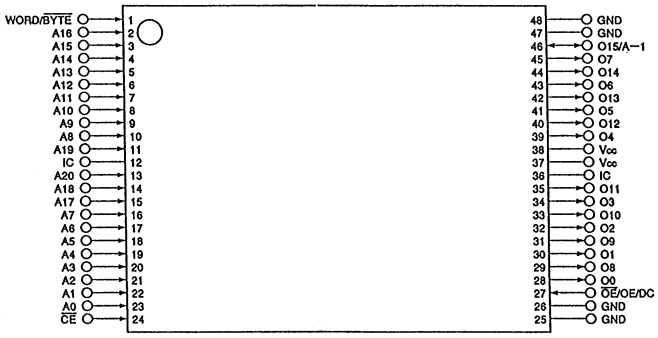


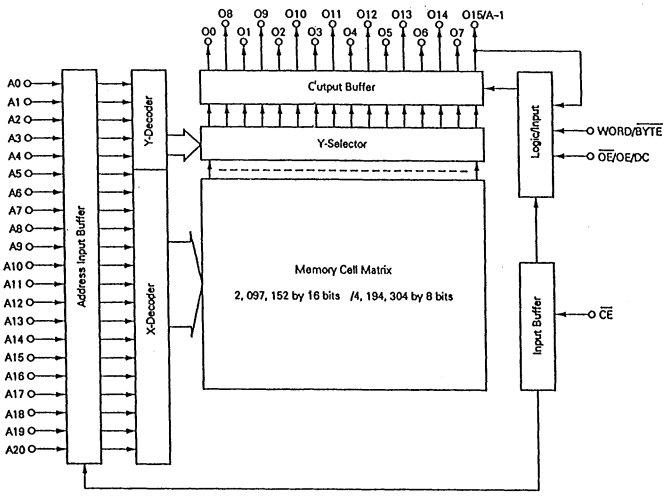
HV803 (IC801)



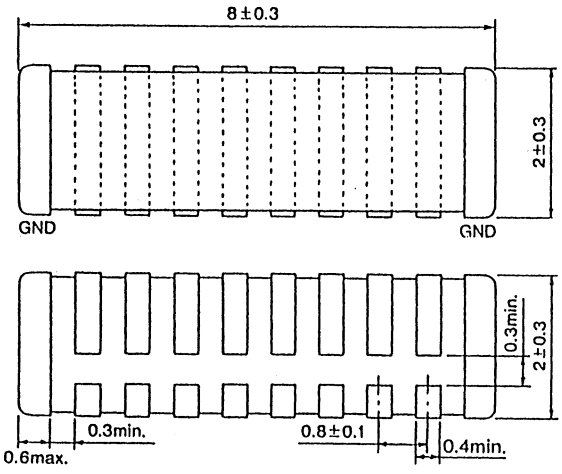


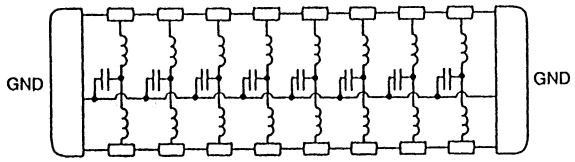
UPD23C32000LGY




O8 O9 O10 O11 O12 O13 O14 O15/A-1
O0 O1 O2 O3 O4 O5 O6 O7
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20
Address Input Buffer
Y-Decoder
X-Decoder
Output Buffer
Y-Selector
Memory Cell Matrix
2, 097, 152 by 16 bits /4, 194, 304 by 8 bits
Logic/Input
Input Buffer
WORD/BYTE
OE/OE/OC
CE

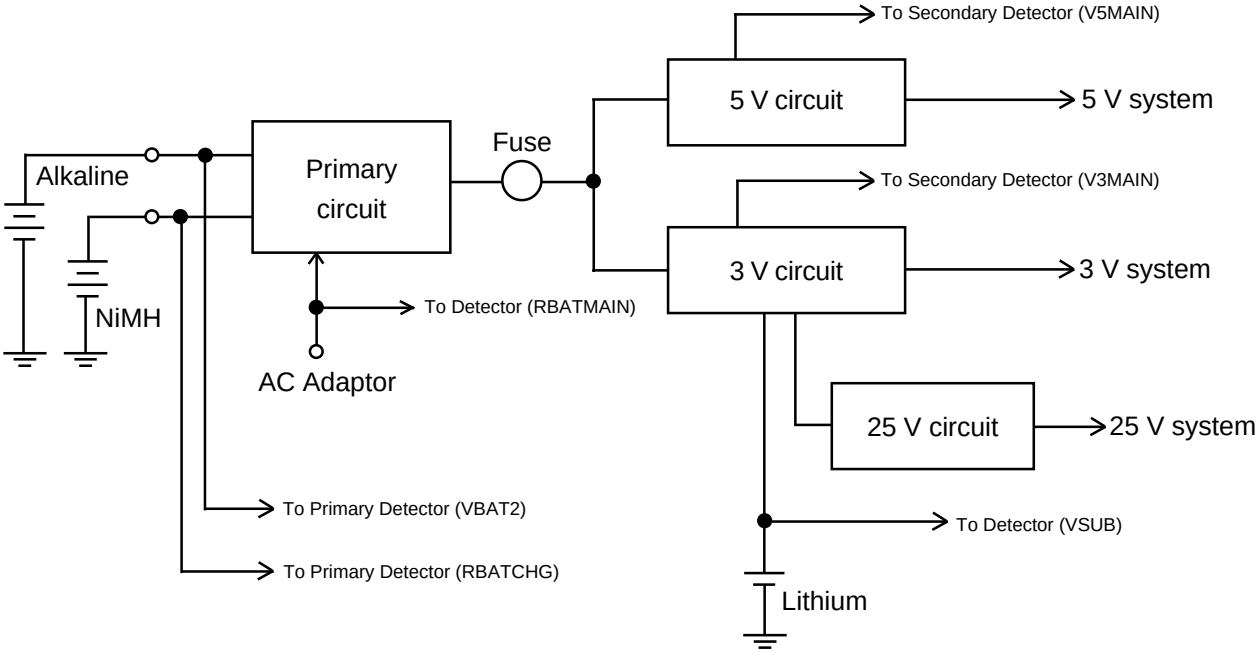
EMI FILTER ARRAY





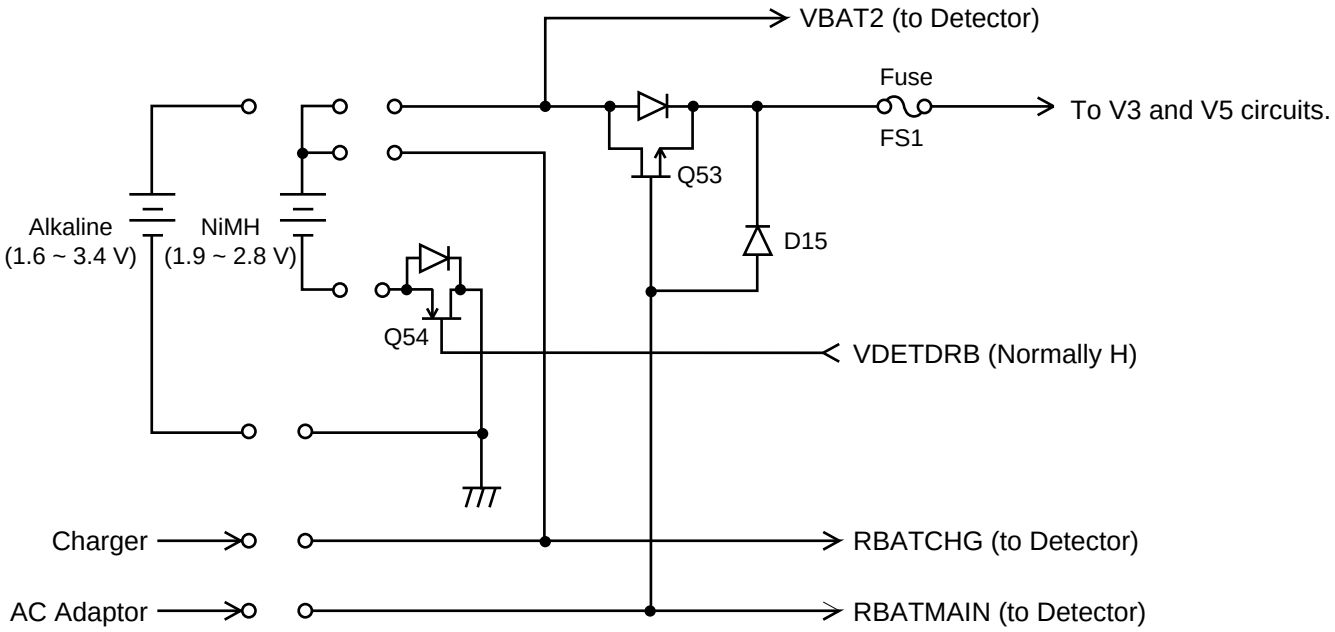
POWER SUPPLY CIRCUIT

The power supply circuit consists of 4 blocks which are Primary circuit, 5 V circuit, 3 V circuit and 25 V circuit as follows;



Primary Circuit

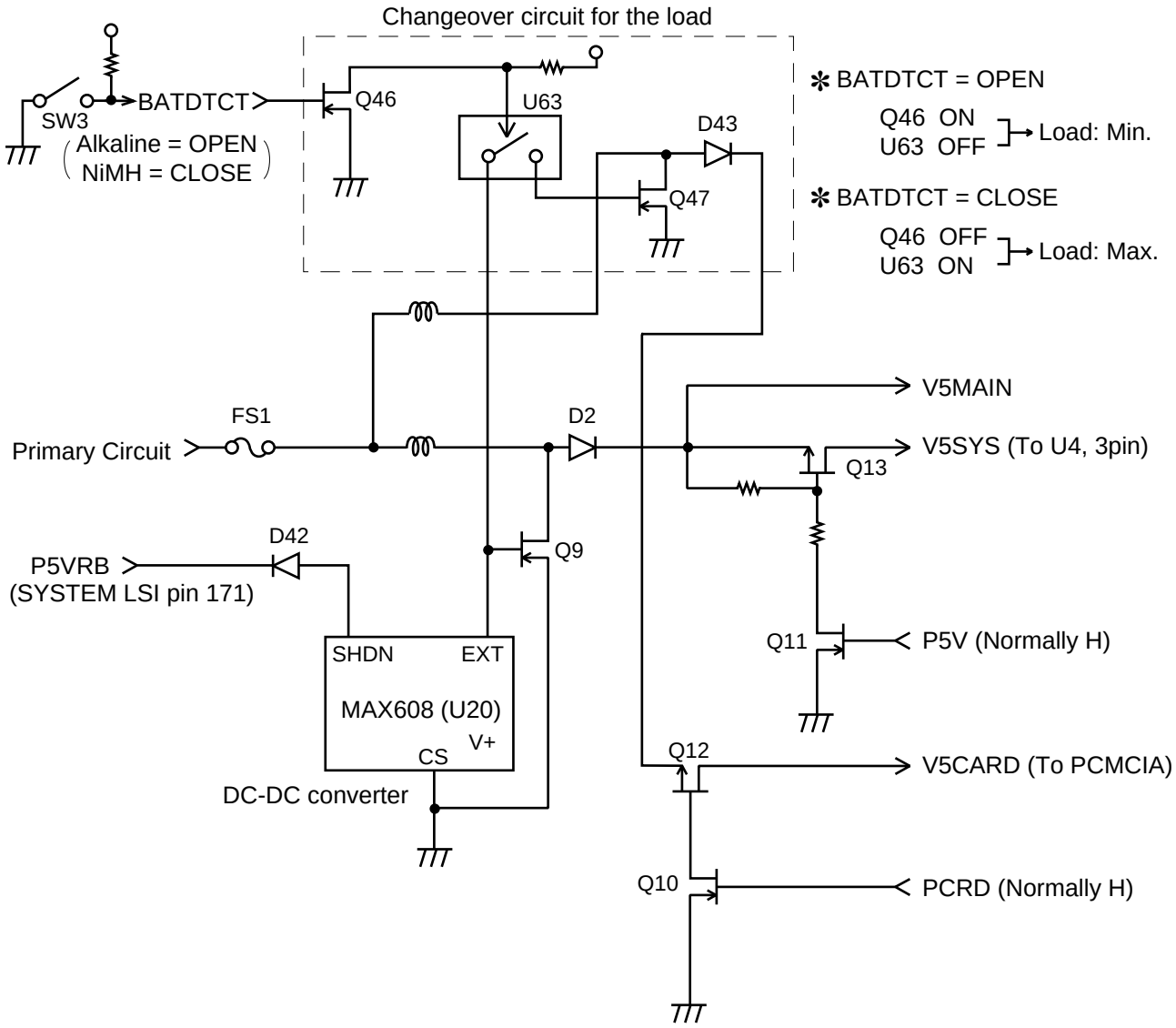
The voltage from both batteries, alkaline and NiMH, supplies to V5 and V3 circuits through the fuse when the battery is loaded.
The VBAT2 and RBATCHG are for the reference voltage for Primary detectors. VBAT2 is for alkaline batteries detector. RBATCHG is for NiMH detector.
RBATMAIN is for AC adaptor detector. It detects whether AC adaptor is used or not.
VDETDRB is to prevent overdischarge of NiMH. When the unit turns off automatically caused by low battery of NiMH, VDETDRB from detector is H. Then Q54 turns off, it makes the GND line for NiMH cut.



5 V Circuit

DC-DC converter MAX608ESA (U20) generates +5.11 V and it makes up 5 V system.

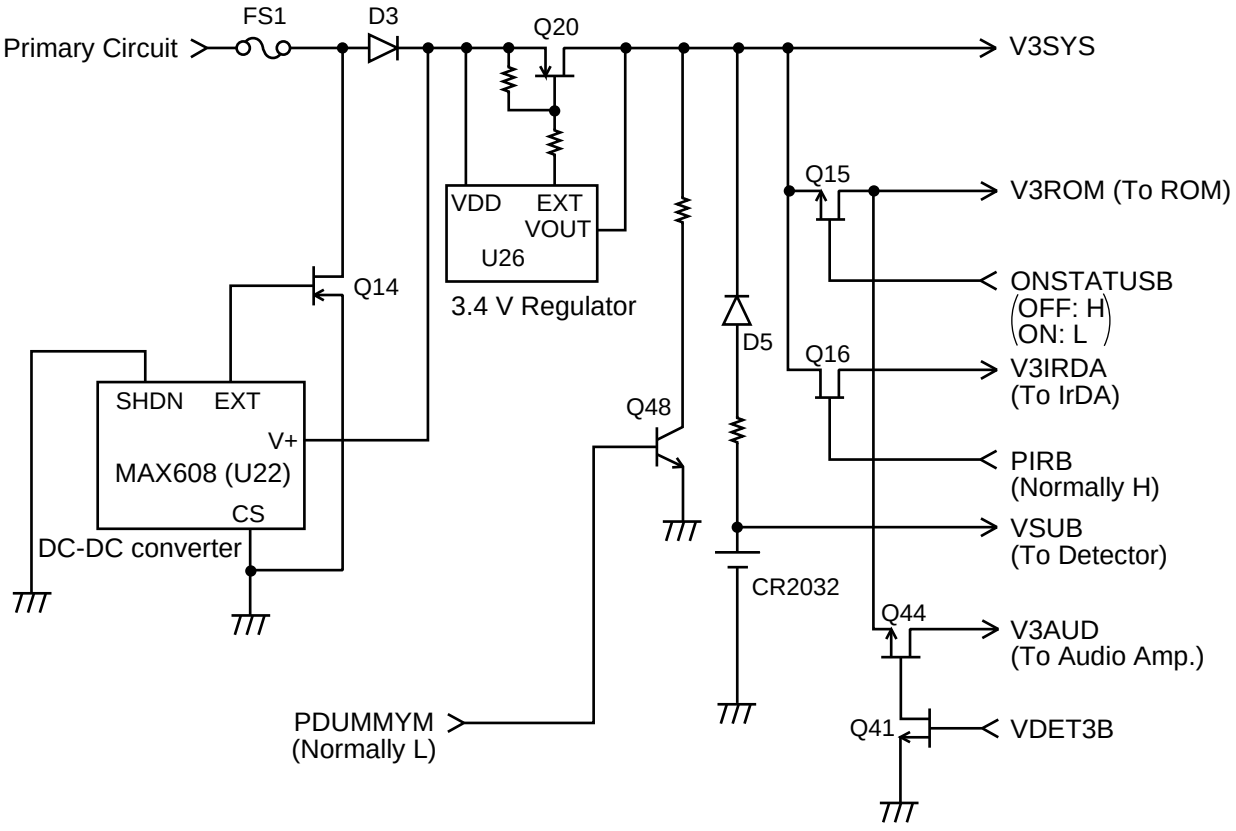
V5MAIN : The reference voltage for the detector.
V5SYS : +5 V source for U4 and 3-pin jack.
P5V : Controls ON/OFF of V5SYS. From pin 170 of SYSTEM LSI.
V5CARD : +5 V source for PCMCIA Card.
PCRD : Controls ON/OFF of V5CARD. From pin 166 of SYSTEM LSI.
BATDTCT: It distinguishes alkaline and NiMH to change the load according to the battery. When alkaline is used, it is H. When NiMH, it is L.
P5VRB : Controls ON/OFF of DC-DC converter (U20). From pin 171 of SYSTEM LSI.



3 V Circuit

DC-DC converter MAX608ESA (U22) generates +3.77 V and it makes up 3 V system.

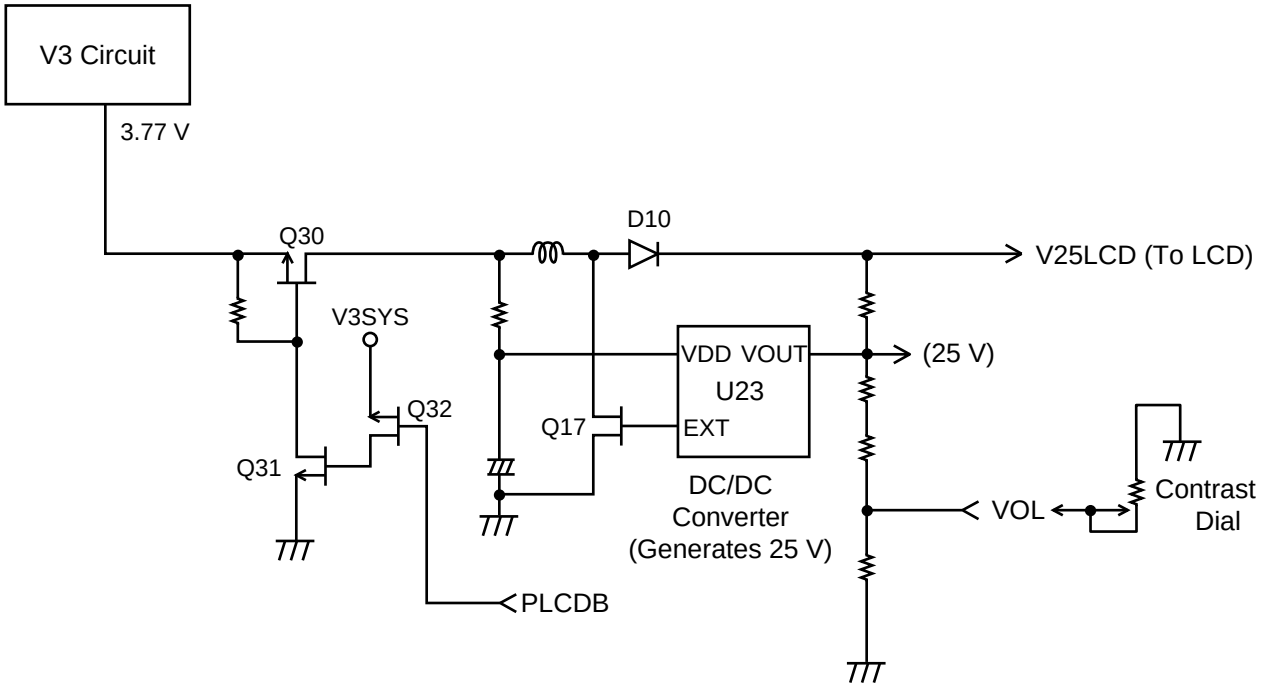
V3MAIN :	The reference voltage for the detector.
V3SYS :	+3.3 V source for U1, U3, U4, U6, D601, D602, Q3~Q7.
V3RAM :	+3.3 V source for DRAM (U7 and U8).
V3ROM :	+3.3 V source for ROM (U301).
ONSTATUSB :	Controls ON/OFF of V3ROM. From pin 90 of SYSTEM LSI.
V3IRDA :	+3.3 V source for IrDA Transceiver TFDS3000 (U18).
PIRB :	Controls ON/OFF of V3IRDA. From pin 156 of SYSTEM LSI.
VSUB :	+3 V source for detecting memory backup battery.
V3AUD :	+3 V source for audio amplifier MC34119 (U5).
VDET3B :	Controls ON/OFF of V3AUD. From detector circuit.
PDUMMYM :	Controls ON/OFF of the load at detecting voltage.



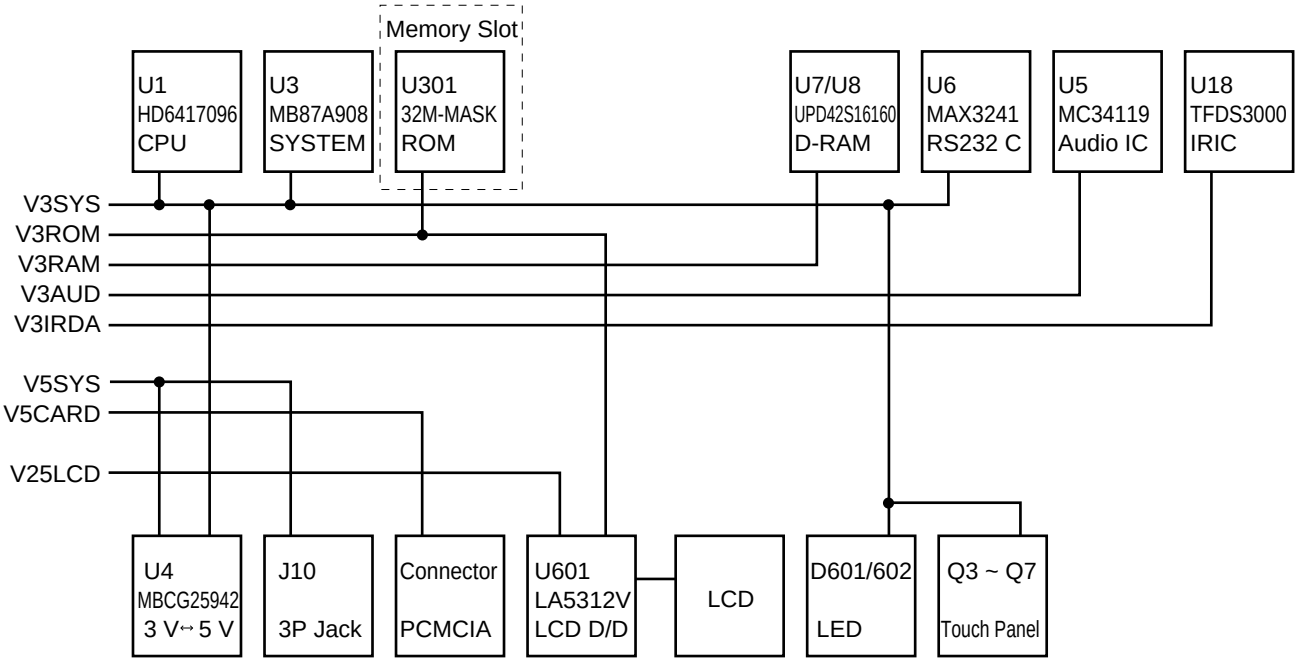
25 V Circuit

DC-DC converter RN5RY202 (U23) generates +25 V and it makes up 25 V system for LCD.

V25LCD : +25 V source for LCD.
VOL : Connect to Contrast Dial on Z305-LD PCB.
PLCDB : Controls ON/OFF of V25LCD. From pin 167 of SYSTEM LSI.
V3SYS : +3.3 V source.



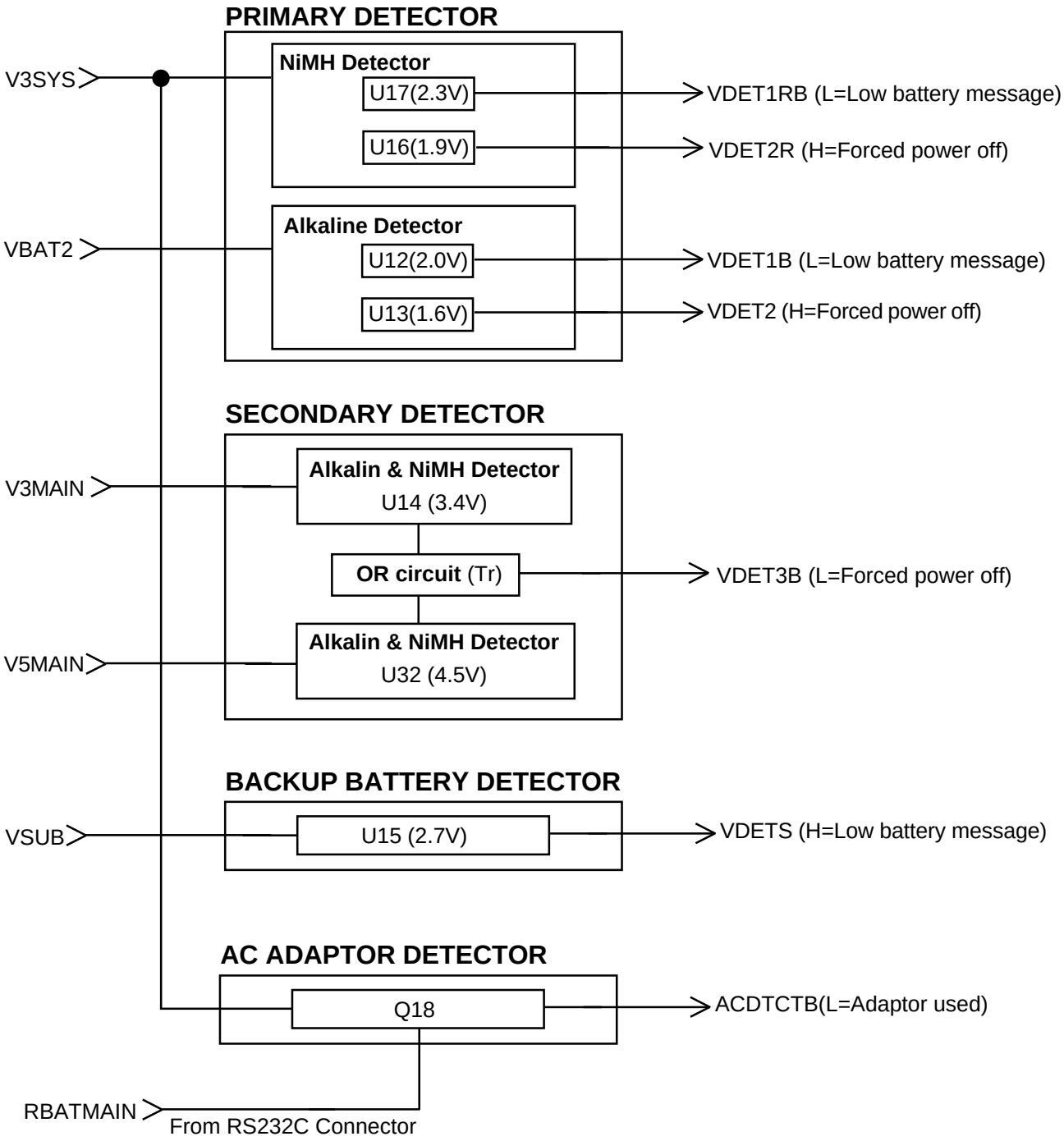
Voltage Line



DETECTOR CIRCUIT

The detector circuit consistes of 4 blocks as follows;

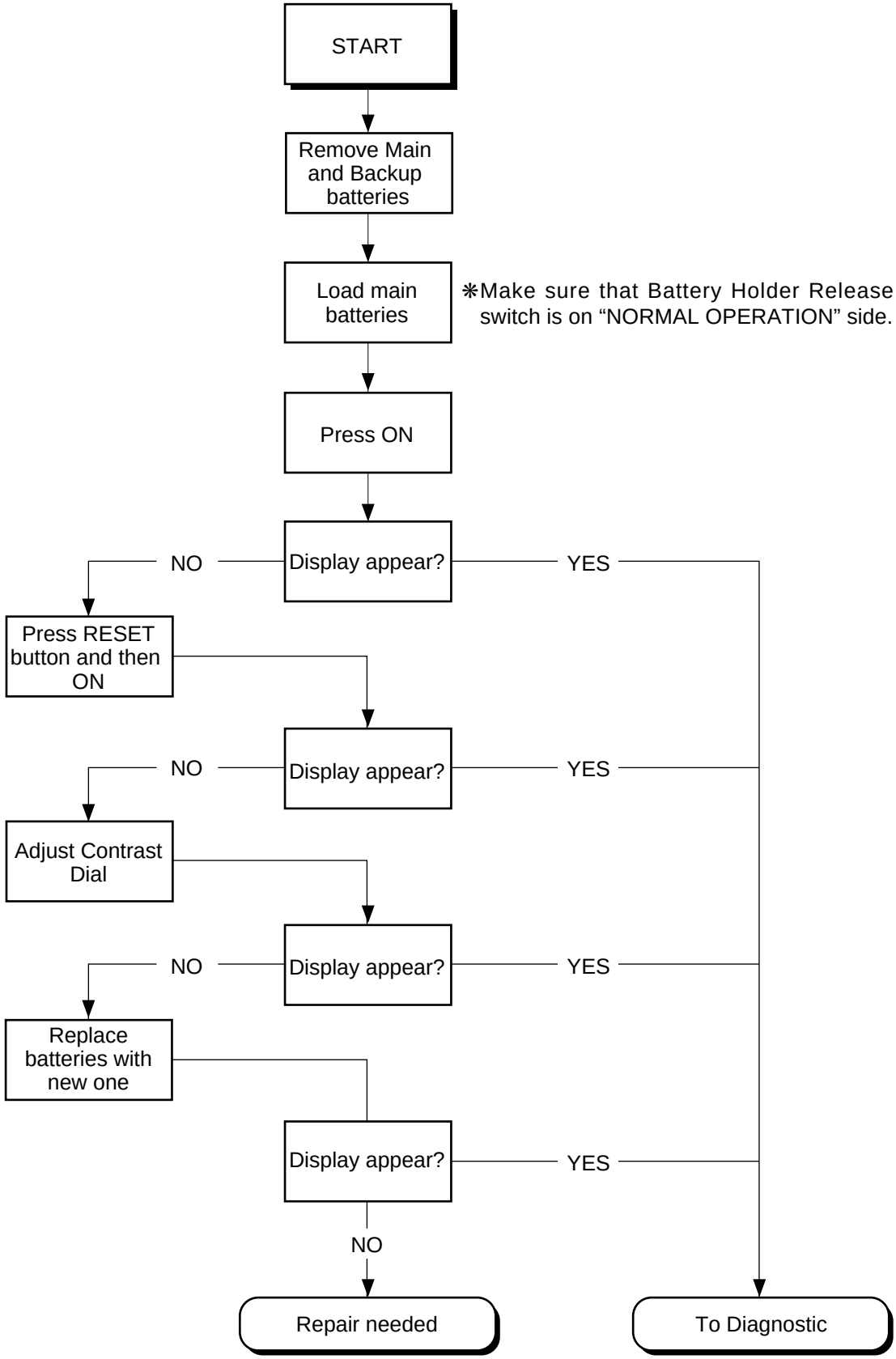
1 : Primary detector (Alkaline and NiMH)
2 : Secondary detector (Alkaline and NiMH)
3 : Backup battery detector
4 : AC Adaptor detector



DIAGNOSTIC PROGRAM

Introduction

The following steps must be followed before diagnostics.



Boot

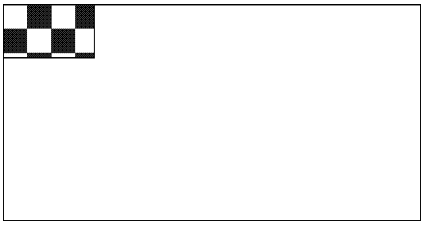
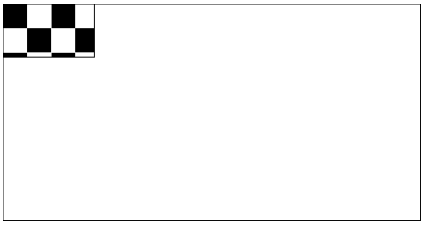
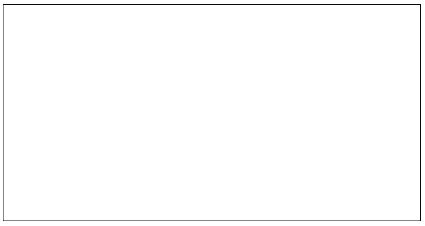
To boot the diagnostics, press RESET button while holding down keys Ctrl, CapsShift and ON. The main menu of diagnostics is displayed after release.

Preparation

1 : A-10 or A-11
2 : Alkaline batteries
3 : Jigs of RS-JIG-232C and RS-JIG-3PIN
4 : RAM Card XC-110
5 : AC-adaptor
6 : Charger
7 : Rechargeable battery pack

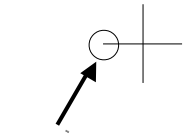
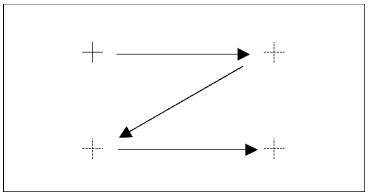
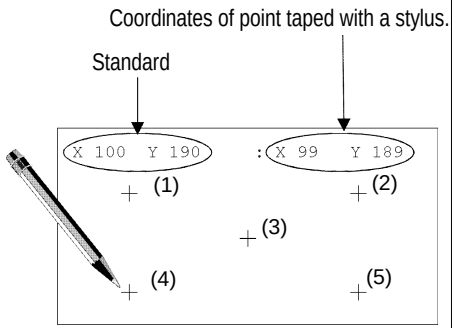
Note: Be sure to keep separate back-up copies of all important data in A-10/A-11, because the DISGNOSTICS make data corrupt.

Step	Operation	Display	Note
Boot	Remove backup battery.		
	Press ON.		
	Load Alkaline batteries.		
	Press RESET while holding down Nortification Button and then release Nortification Button.		No display.
	Press RESET button while holding down keys Ctrl, CapsShift and ON, and then release Ctrl, CapsShift and ON.	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others CPROG Rev1.00	Check the version (Rev.1.00).
Main Battery Check	7	** Others ** 1 Switch 2 PCMCIA (implement) 3 PCMCIA (RAM card) 4 PCMCIA (WAIT) 5 Keyboard RANDOM 6 Keyboard SERIAL 1 7 Keyboard SERIAL 2 8 EL	
	1	VDET1 OFF VDET2 OFF VDET1R OFF VDET2R (indefinite) VDET3 OFF VDETS ON Recharge OFF CHKPRG OFF AC Adapter NOT USED Cover CLOSED CardLock CLOSED Cradle NOT STAY	Make sure that the VDET1 is OFF. If ON, replace batteries with new ones and try again.

Step	Operation	Display	Note
Display	ENTER, ENTER, 1		CHIDORI : Checker pattern.
	SPACE		Reverse : Reverse checker pattern.
	SPACE		Flame : The most outside dots.
	SPACE		All : All dots
	SPACE		Clear : No display
Serial	SPACE Insert RS-JIG-232C to RS-232C connector and RS-JIG-3PIN to data communication jack.	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	
	0 Remove RS-JIG-232C and RS-JIG-3PIN .	** RESULT ** RS232C OK PCMCIA NG 3 PIN OK RAM OK 2M bytes (or 4M byte)	Make sure display shows OK without PCMCIA.

Step	Operation	Display	Note
PCMCIA	ENTER, 7 Insert RAM card into card slot.	** Others ** 1 Switch 2 PCMCIA (implement) 3 PCMCIA (card) 4 PCMCIA (WAIT) 5 Keyboard RANDOM 6 Keyboard SERIAL 1 7 Keyboard SERIAL 2 8 EL	
	3 Remove RAM card.	** Test data "0xAAAA" ** Test data "0x5555" ** Test data "address" PC Card -----> OK	Make sure the display shows OK.
Memory	ENTER, ENTER, 3, 2	** RAM TEST ** *** Write address to RAM ↓ a few sec. ** Memory ** 1 RAM TEST 2 RAM WRITE 3 RAM READ 4 ROM CHECK SUM 5 ROM BUS CHECK	This mode writes data to all bits of RAM.
	3	** Memory ** 1 RAM TEST 2 RAM WRITE 3 RAM READ 4 ROM CHECK SUM 5 ROM BUS CHECK *** Read and Compare RAM READ CHECK ------> OK	This mode reads data which is written by step 2 (RAM WRITE) and compares the data read with data written. Make sure the display shows OK.
	ENTER, 5	** ROM BUS CHECK SUM ** SUM 1 (HIGH) = 9FE SUM 2 (LOW) = 128E	This mode displays the check sum value for 1-bit(high) and 1-bit(Low) of ROM.
	ENTER, 4	** ROM CHECK SUM ** base addr. sum value SUM 1 (A0000000) = 817F SUM 2 (A0200000) = 3C33	This mode displays the check sum value. It takes 12 sec..
Switches	ENTER, ENTER, 7	** Others ** 1 Switch 2 PCMCIA (implement) 3 PCMCIA (card) 4 PCMCIA (WAIT) 5 Keyboard RANDOM 6 Keyboard SERIAL 1 7 Keyboard SERIAL 2 8 EL	

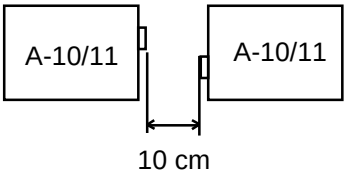
Step	Operation	Display	Note
Switches	1	VDET1 OFF VDET2 OFF VDET1R OFF VDET2R (indefinite) VDET3 OFF VDETS ON Recharge OFF CHKPRG OFF AC Adapter NOT USED Cover CLOSED CardLock CLOSED Cradle NOT STAY	This mode checks switches and detectors and result is displayed. Make sure the both LEDs flash on and off.
	Press Notification button.	CHKPRG ON	Make sure the both LEDs turn off.
	Release Notification button.	CHKPRG OFF	
	Slide Card Lock switch to FREE.	CardLock OPEN	
	Slide Card Lock switch to LOCK.	CardLock CLOSED	
	Slide Battery Replacement switch to REPLACE.	Cover OPEN	
	Slide Battery Replacement switch to NORMAL.	Cover CLOSED	
	Plug-in AC adapter.	AC Adapter USED	
	Replace Rechargeable Battery.	Recharge ON	
	Replace Alkaline batteries.	Recharge OFF	
	Plug-out AC adapter.	AC Adapter NOT USED	

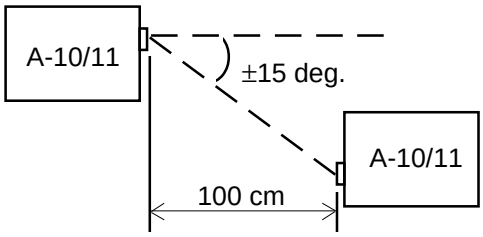
Step	Operation	Display	Note
Keyboard	ENTER, 6	** Keyboard Serial **	
	"ON", "OFF", "EL", "ESC", "1",----------"DEL", "`", "Q", ----------"=", "\", "TAB", "A",-----"", "ENTER", "Shift",----"UP", "CapsShift", "Ctrl",----------"PgDn", "End"	ON OFF EL ESC 1 2 3 4 5 6 7 8 9 0 -BS ` q w e r t y u i o p = ¥ TAB a s d f g h j k l ; ' Enter Shift z x c v b n m , . / PgUp Caps Ctrl St Alt SP [ ] Home PgDown End Key ------> OK	Make sure the display shows OK.
Touch panel	ENTER, ENTER, 2	** Touch Panel ** 1 Calibration 2 Case 3 Points 4 Cross	
	1 Tap on the left end of a cross as each one appears.  Tap here	 ** Touch Panel ** 1 Calibration 2 Case 3 Points 4 Cross	This mode checks calibration state of touch panel. A cross is indicated on the LCD. If a next cross does not appear when you tap the center of a cross, it is NG. When you tap the fourth cross, Touch Panel menu appears.
	2	** Case ** Case ----> OK	Make sure the display shows OK.
	ENTER, 3 1:Tap center of +(1). 2:Tap center of +(2). 3:Tap center of +(3). 4:Tap center of +(4). 5:Tap center of +(5).		1:X 100 Y 50 : X xx Y xx 2:X 380 Y 50 : X xx Y xx 3:X 236 Y 116 :X xx Y xx 4:X 100 Y 190 X xx Y xx 5:X 380 Y 190 :X xx Y xx The remainder of value X and Y is under ±4 dots, it is OK. If no input, it is NG.

Step	Operation	Display	Note
EL	ENTER, ENTER, 7, 8	OFF -------> ON	Check EL turns on.
	ENTER, 8	ON -------> OFF	Check EL turns off.
Audio	ENTER, ENTER, 6	** Audio ** 1 0.5 kHz 2 1 kHz 3 2 kHz	This mode makes tone of sine-wave sound. Hear each tone and check it. To cancel the tone, press ENTER.
	ENTER	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	

IrDA Communication Test

Prepare 2 units and place them as follows;





Step	UNIT-1		UNIT-2		Note
	Operation	Display	Operation	Display	
IrDA		** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others		** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	
	4	** Serial ** <RS232C Check> 1 Loop Back 2 Send/Receive <IrDA Check> 3 Interactive 4 Send/Receive <3 PIN Check> 5 Loop Back	4	** Serial ** <RS232C Check> 1 Loop Back 2 Send/Receive <IrDA Check> 3 Interactive 4 Send/Receive <3 PIN Check> 5 Loop Back	
	4	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	4	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	
	1	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <SEND MODE>		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	
		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <SEND MODE>	2	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <RECEIVE MODE> HHHHHHHHHHHHHHHHH HHHHHHHHHHHHHHHHH HHHHHHHH.....	"H" indication continuing without error message for more than 1 second (ERROR message is indicated in transmission beginning and transmission closing, it is normal.)

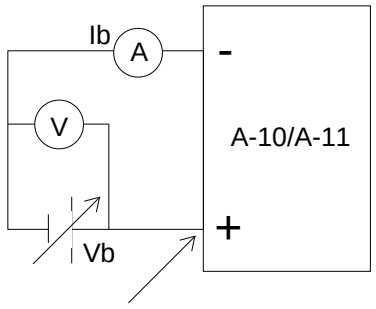
Step	UNIT-1		UNIT-2		Note
	Operation	Display	Operation	Display	
	ENTER	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)		HHHHHHHHHHHHHHHHHH HHHHHHH	Make sure H display stops
		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	ENTER	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	
		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	1	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <SEND MODE>	
	2	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <RECEIVE MODE> HHHHHHHHHHHHHHHHHH HHHHHHHHHHHHHHHHHH HHHHHHHH.....		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate) <SEND MODE>	"H" indication continuing without error message for more than 1 second (ERROR message is indicated in transmission beginning and transmission closing, it is normal.)
		HHHHHHHHHHHHHHHHHH HHHHHHH	ENTER	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	Make sure H display stops
	ENTER	<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)		<Infrared SEND/RECEIVE> 1 Send data (MAX Baudrate) 2 Receive data(MAX Baudrate) 3 Send data (MIN Baudrate) 4 Receive data(MIN Baudrate)	Change the communication distance or angle, and repeat the IrDA communication check.
	ENTER, ENTER	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	ENTER, ENTER	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	End of IrDA check

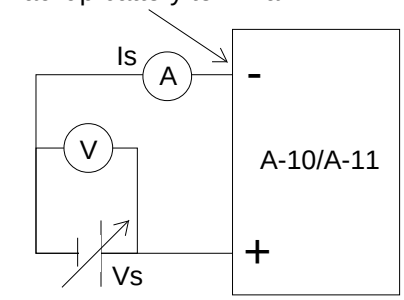
Current Consumption and Voltage Detectors Check

Prepare the following items;

1 : Power supply 1 unit
2 : Ammeter 1 unit
3 : Voltmeter 1 unit
4 : AC adapter 1 unit
5 : Charger 1 unit

Current Consumption Check

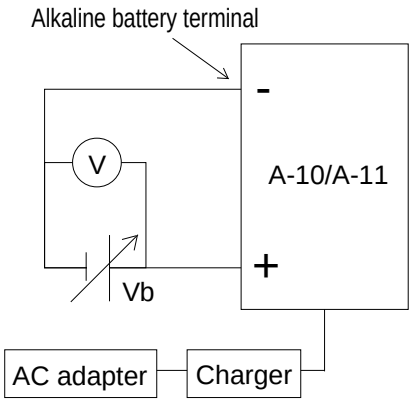
Step	Operation	Display (Wiring)	Note
Setting	1: Maximum of contrast dial. 2: Set the range of Ammeter to 1 A. 3: Vb = 2.6 ± 0.02 V		Connect the items as figure. Do not load the backup battery.
	Boot the diagnostic program	** Main Menu ** 0 AUTO MODE 1 DISPLAY 2 TOUCH PANEL 3 MEMORY 4 SERIAL 5 POWER CONTROL 6 AUDIO 7 Others	To boot the diagnostic, refer to page-40.
	5	** Power Control ** 1 40MHz 2 standby 3 sleep	Power Control menu is for current consumption check.
Main Battery at ON	1	** Power Control ** 1 40MHz 2 standby 3 sleep Currently CPU clock is 40MHz	Current consumption at ON. Measure the current. Ib = 210 mA or under.
Main Battery at OFF	ENTER, 2	(Power off)	Current consumption at OFF. Measure the current. Ib = 0.8 mA or under (2 Mbyte) Ib = 1.0 mA or under (4 Mbyte)

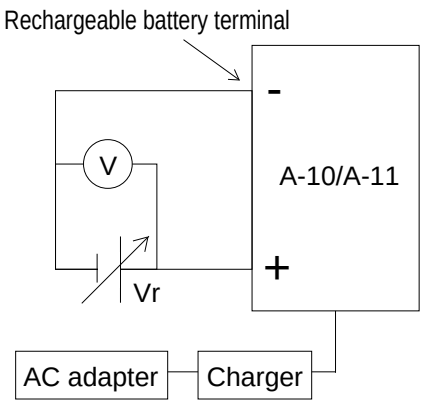
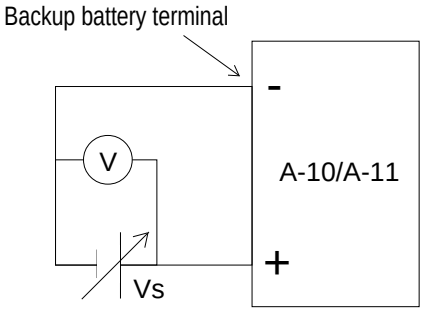
Step	Operation	Display (Wiring)	Note
Main Battery at SLEEP	ON, 3	** Power Control ** 1 40MHz 2 standby 3 sleep Sleep mode	Current consumption at SLEEP. Measure the current. Ib = 67 mA or under.
Backup battery	1 : Turn the power off. 2 : Supply the voltage to backup battery terminals as figure right. 3 : Remove main batteries. 4 : Measure the current. Vs = 3.0 ± 0.05 V	Backup battery terminal  	Connect the items as figure.
		(No display)	Current consumption of backup battery. Measure the current. Is = 150 μA or under. (2M byte) Is = 250 μA or under. (4M byte)

Voltage Detectors Check

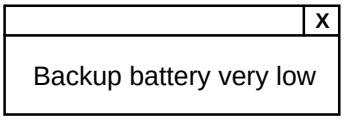
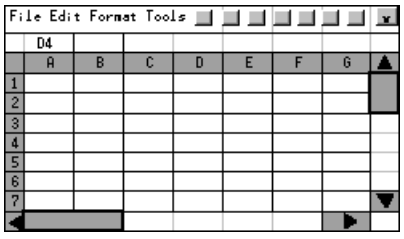
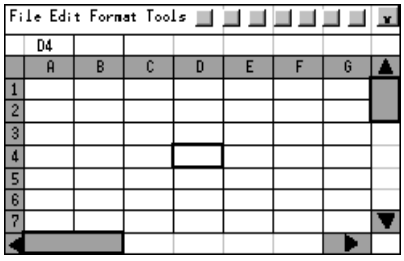
Check the following detectors;

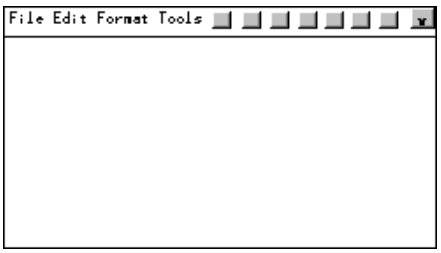
VDET1: Low battery message detector for alkaline batteries.(2.0 ± 0.04 V or under)
VDET2: Foced power off detector for alkaline batteries.(1.6 ± 0.04 V or under)
VDET1R: Low battery message detector for rechargeable battery.(2.3 ± 0.03 V or under)
VDET2R: Foced power off detector for rechargeable battery.(1.9 ± 0.02 V or under)
VDETS: Low battery message detector for back-up battery.(2.7± 0.03 V or under)

Step	Operation	Display (Wiring)	Note
Setting	Vb = 2.6 ± 0.02 V		Connect the items as figure.
	ENTER, 7, 1	VDET1 OFF VDET2 OFF VDET1R OFF VDET2R (indefinite) VDET3 OFF VDETS ON Recharge OFF CHKPRG OFF AC Adapter USED Cover CLOSED CardLock CLOSED Cradle NOT STAY	
VDET1	Put power supply voltage down by degrees.	VDET1 ON VDET2 OFF	Measure the voltage that VDET1 becomes ON. VDET1 = 2.0 ± 0.04 V
VDET2	Put power supply voltage down by degrees.	VDET1 ON VDET2 ON	Measure the voltage that VDET2 becomes ON. VDET2 = 1.6 ± 0.04 V

Step	Operation	Display (Wiring)	Note
Setting	Change to connect power supply to the terminals for rechargeable battery. Vr = 2.6 V		Connect the items as figure.
VDET1R	Put power supply voltage down by degrees.	VDET1R ON VDET2R OFF	Measure the voltage that VDET1R becomes ON. VDET1R= 2.3 ± 0.03 V
VDET2R	Put power supply voltage down by degrees.	VDET1R ON VDET2R ON	Measure the voltage that VDET2R becomes ON. VDET2R= 1.9 ± 0.02 V
VDETS	Change to connect power supply to the terminals for backup battery. Vs = 3.0 V		Connect the items as figure.
	Put power supply voltage down by degrees.	VDETS ON	Measure the voltage that VDETS becomes ON. VDETS = 2.7 ± 0.03 V

Finishing

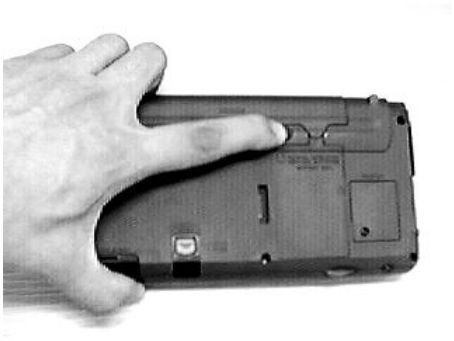
Step	Operation	Display (Wiring)	Note
Finishing	Remove Back-up battery.		
	Remove Main bateries.		
	Re-load main batteries.		
	Press RESET button.		
	ON	(Welcome wizard)	For 10 seconds.
	ENTER, ENTER Tap the center of 5 targets.	Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen. Press the Esc key to cancel. New calibration settings have been measured. Press the Enter key to accept the new settings. Press the Esc key to keep the old settings.	
	ENTER	(Home time setting)	
	Tap NEXT	(Date and Time setting)	Make sure the clock works.
	Tap NEXT four times and Done. Tap close button.(X)		
	Tap START, PROGRAM and double click Pocket Excel.		Open Pocket Excel.
	Select cell D4. Click ▶, ◀, ▼ and ▲ Tap File and Close.		Make sure the table scrolls. Close Pocket Excel.

Step	Operation	Display (Wiring)	Note
	Double click Pocket Word from Program Folder.		Open Pocket Word.
	Hold key "A" press.	aaaaaaaaaaaaaaa.....	"a" displays successively.
	Hold key "D" press not to release from key "A".	aaaaaaaaaaaaaaadddddd

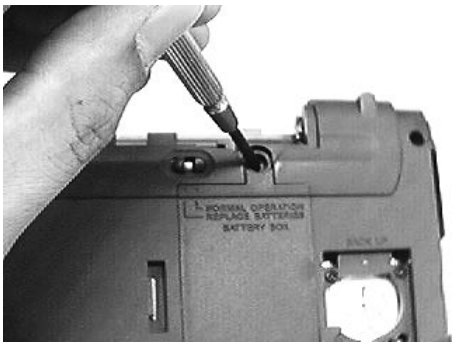
DISASSEMBLY

Memory Slot

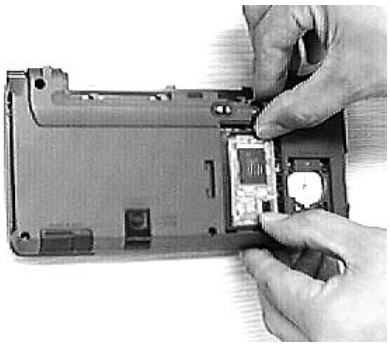
1. Remove the main batteries and backup battery cover, then remove lithium battery.

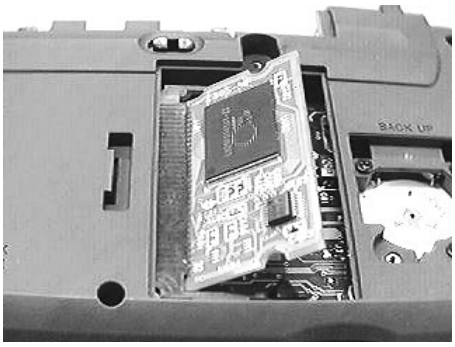


2. Remove 1 screw and then remove ROM case.

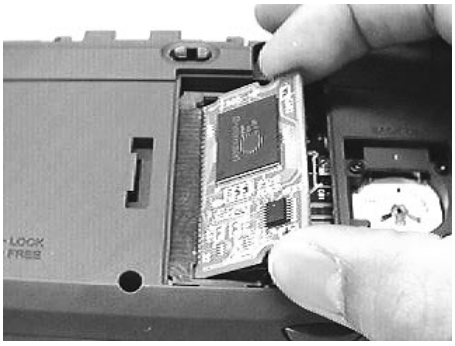


3. Put the memory slot guide to outside, the memory slot goes up.



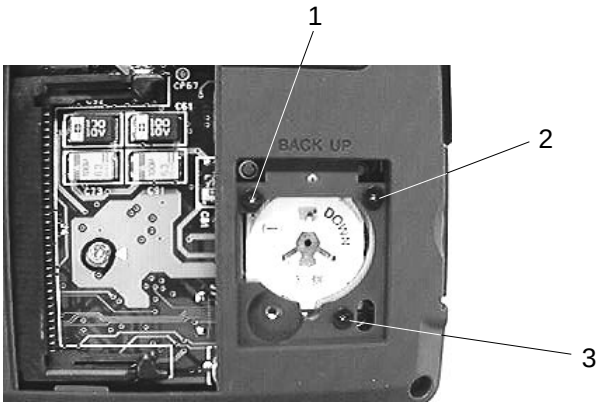


4. Remove the memory slot.

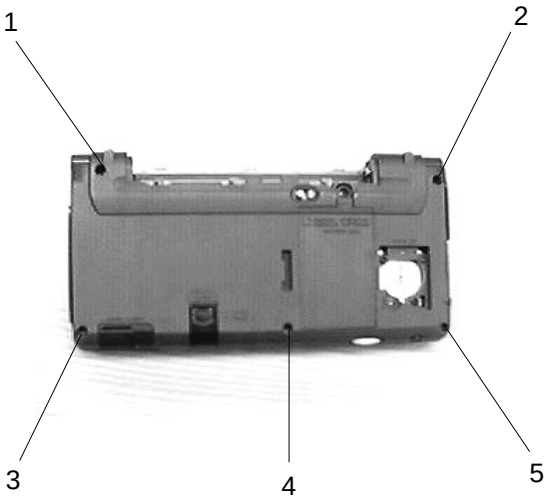


Lower Case B Ass'y

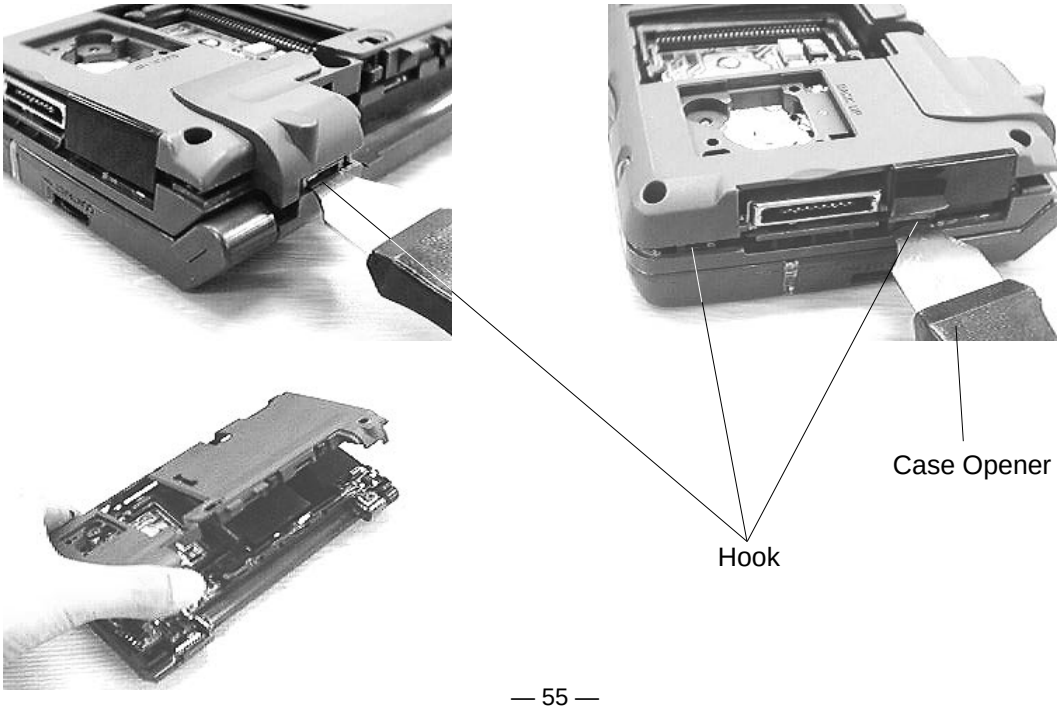
5. Remove 3 screws from backup battery compartment.



6. Remove 5 screws from Lower Case B.

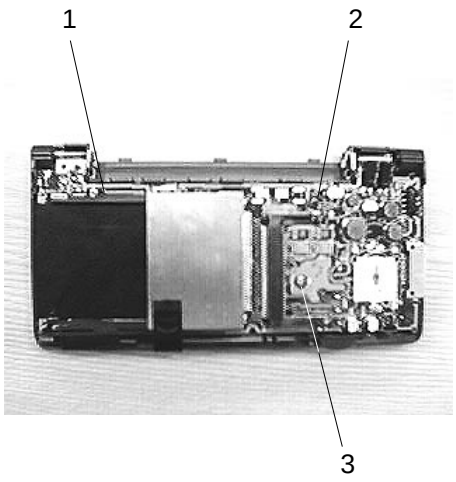


7. Unhook 3 points with Case Opener and then remove Lower Case B ass'y.

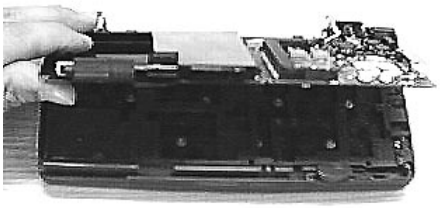


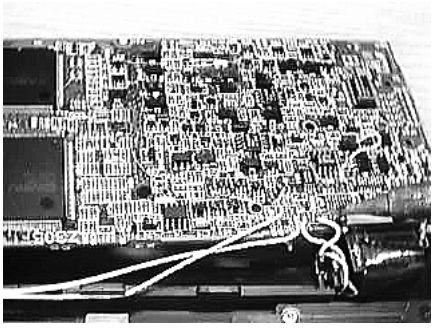
Z305-1 PCB Ass’y

8. Remove 3 screws.

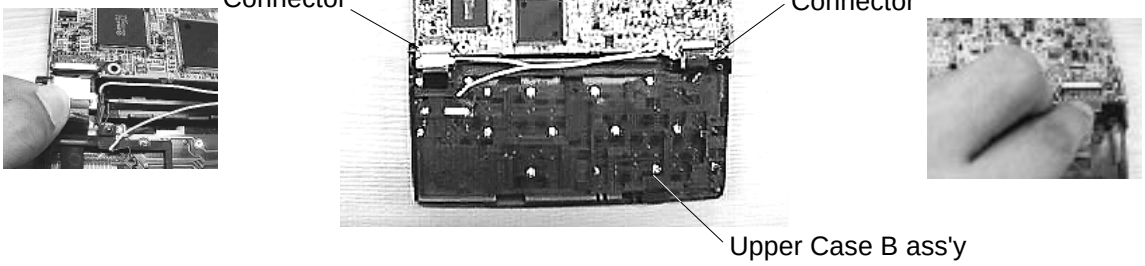


9. Turn over Z305-1 PCB Ass’y and then remove 4 terminals with soldering iron.



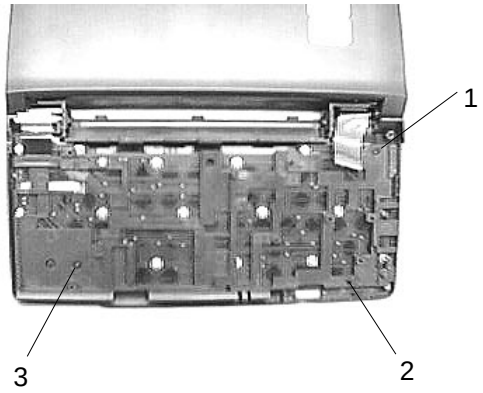


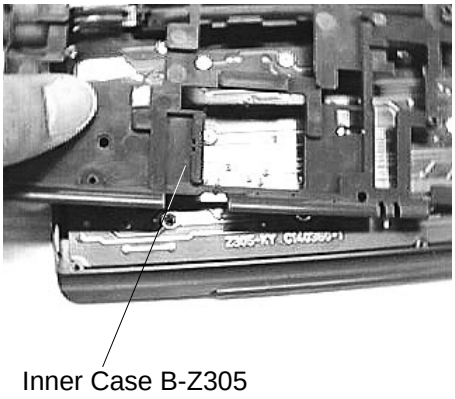
10. Remove 2 connectors from PCB ass’y and then remove PCB ass’y from Upper Case B ass'y.



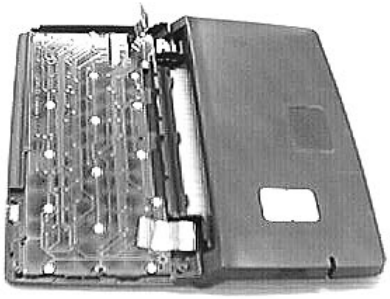
Upper Case B Ass'y (Keyboard Unit)

11. Remove 3 screws from Upper Case B ass'y and then remove Inner Case B-Z305.

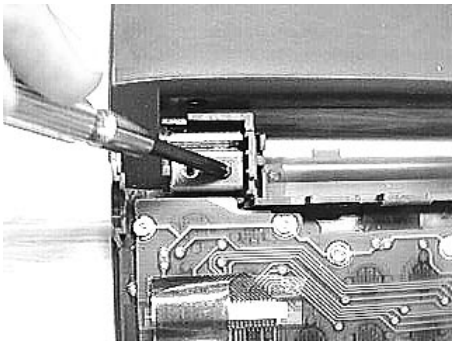




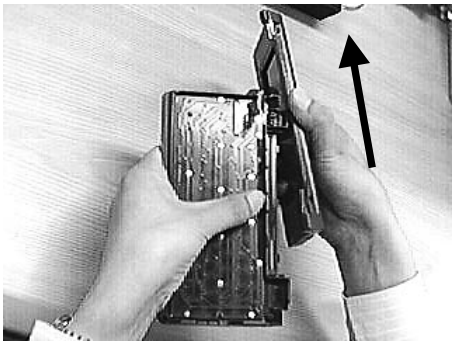
12. Open the case to be flat.



13. Remove 1 screw from the hinge (Tilt Unit).

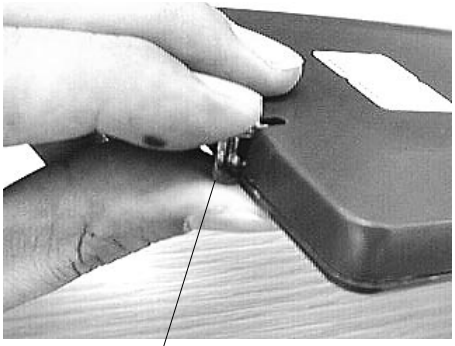


14. Unhook the hinge and slide the display unit to arrow direction.

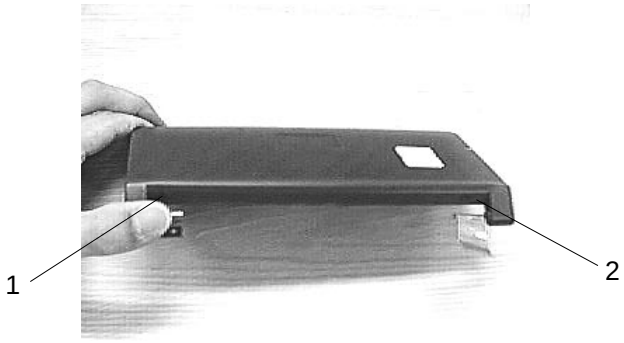


LCD Module and Touch Panel

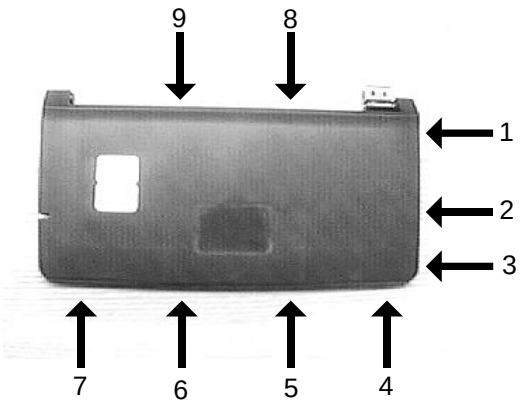
15. Remove LED cover from Display Unit.



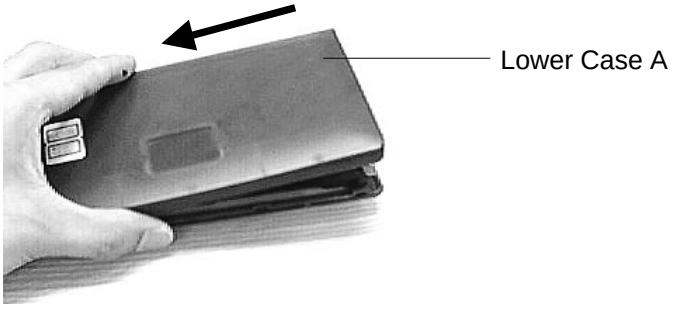
16. Remove 2 screws from Display Unit.



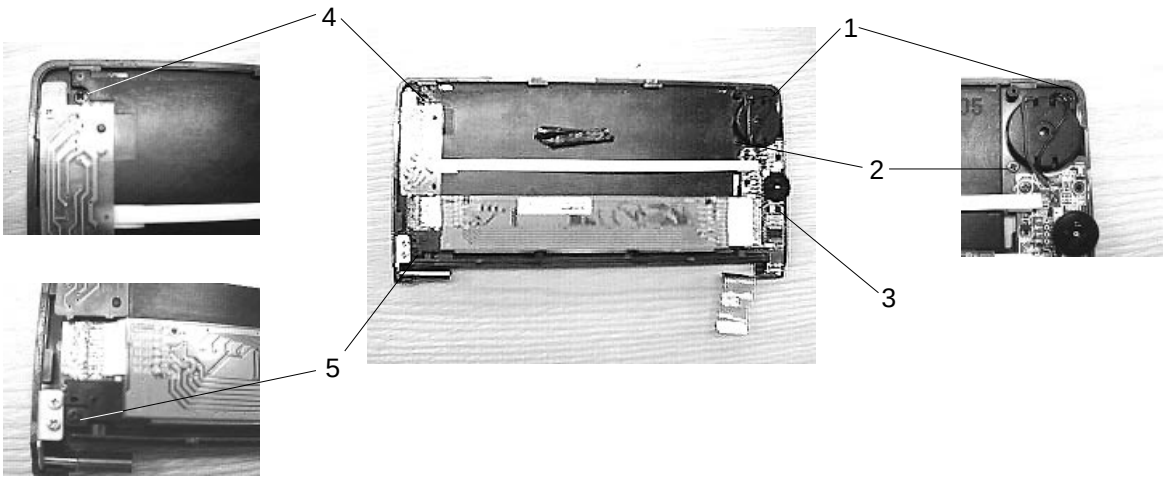
17. Unhook 9 points with case opener in the order of the following number.



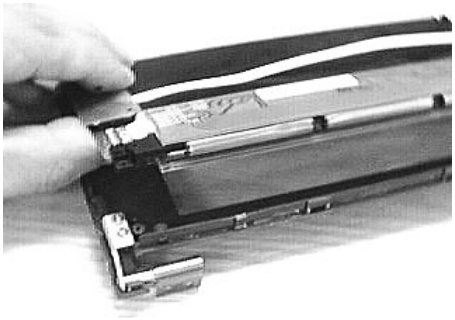
18. Lift up the Lower Case A and slide it to arrow direction. Be careful to not break the contrast dial.



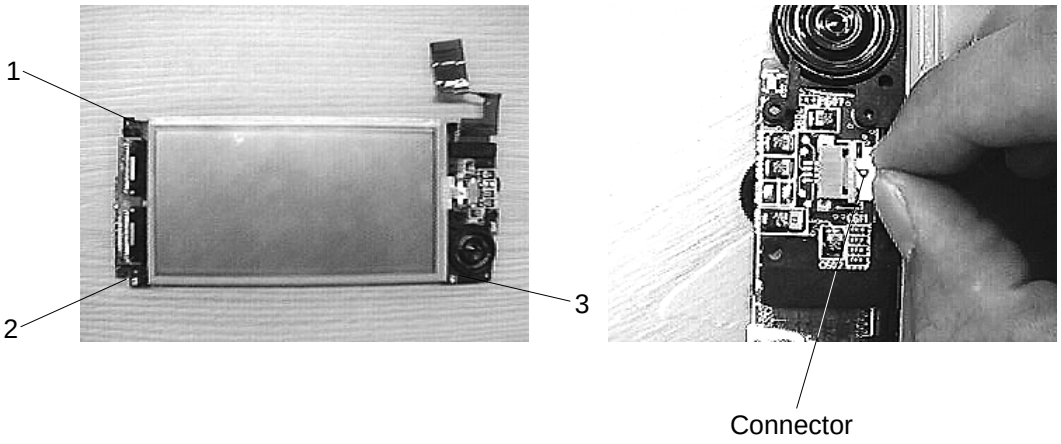
19. Remove 5 screws.



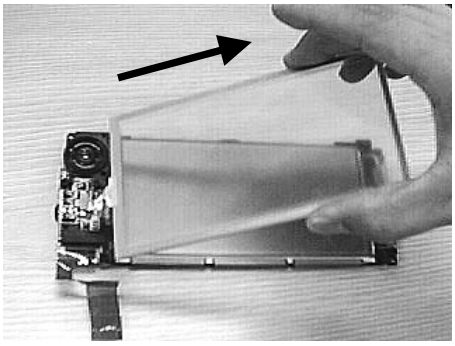
20. Lift up the LCD module and remove it.



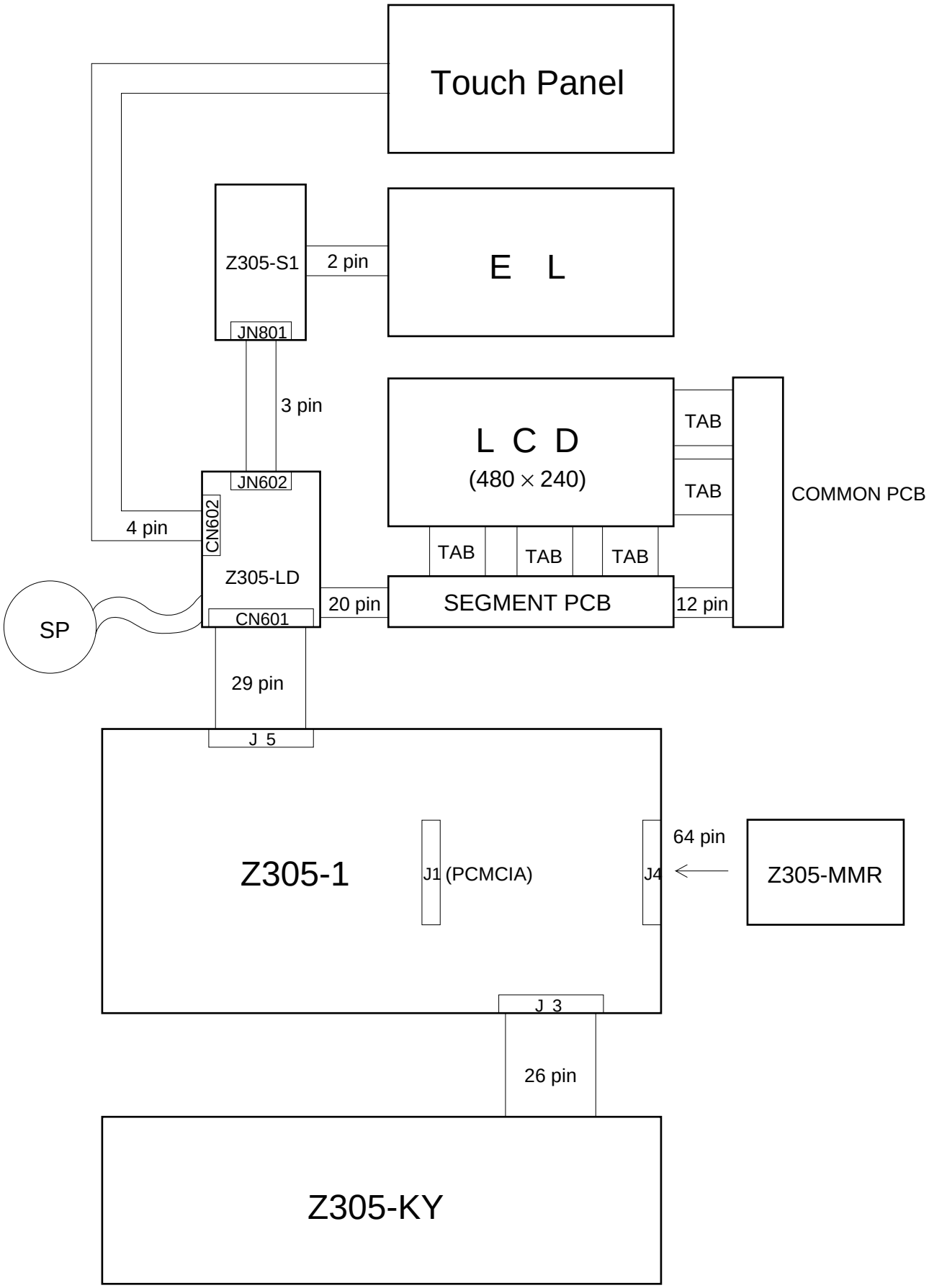
21. Remove 3 screws and remove the connector.



22. Lift up the Touch Panel ass'y and slide it to arrow direction.

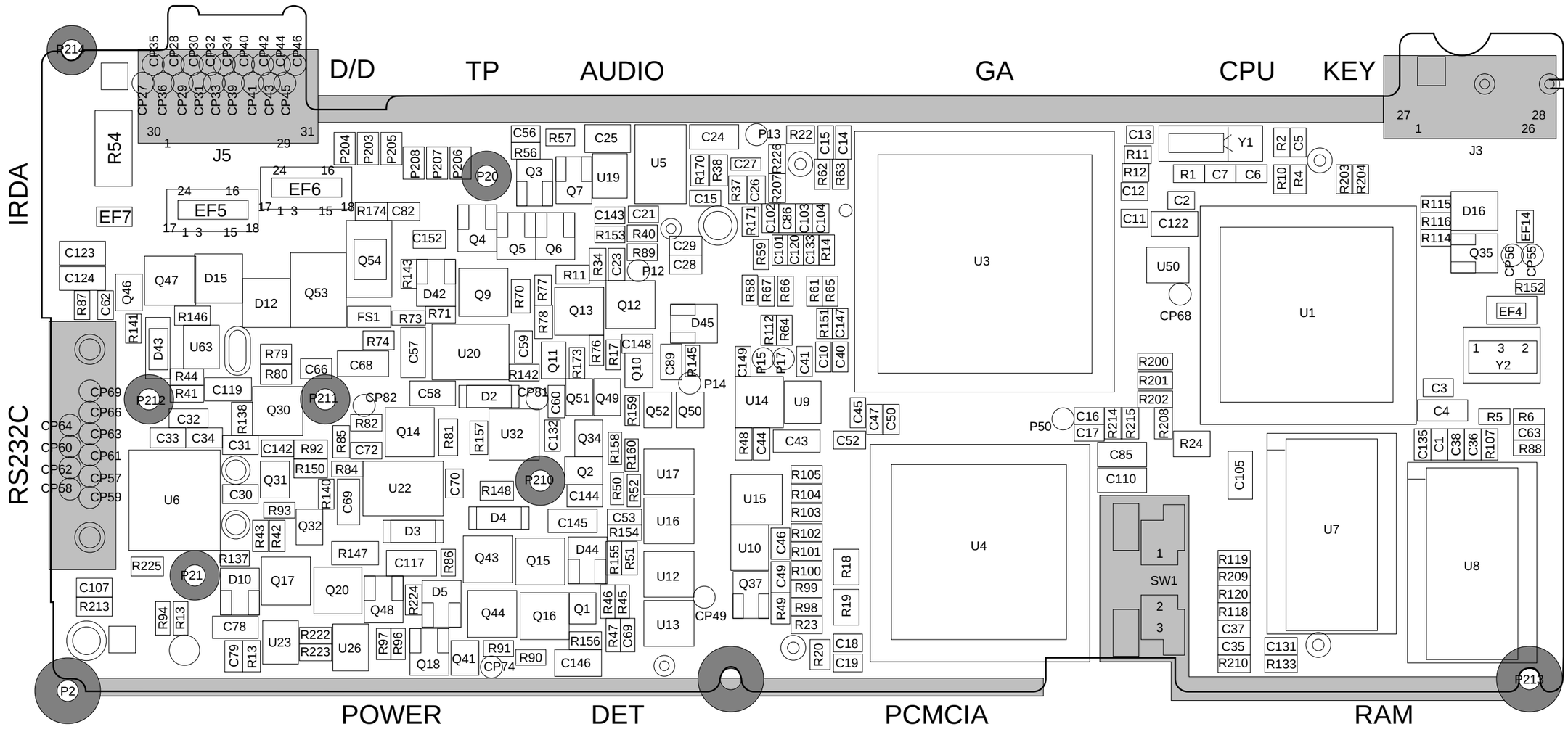


WIRING DIAGRAM

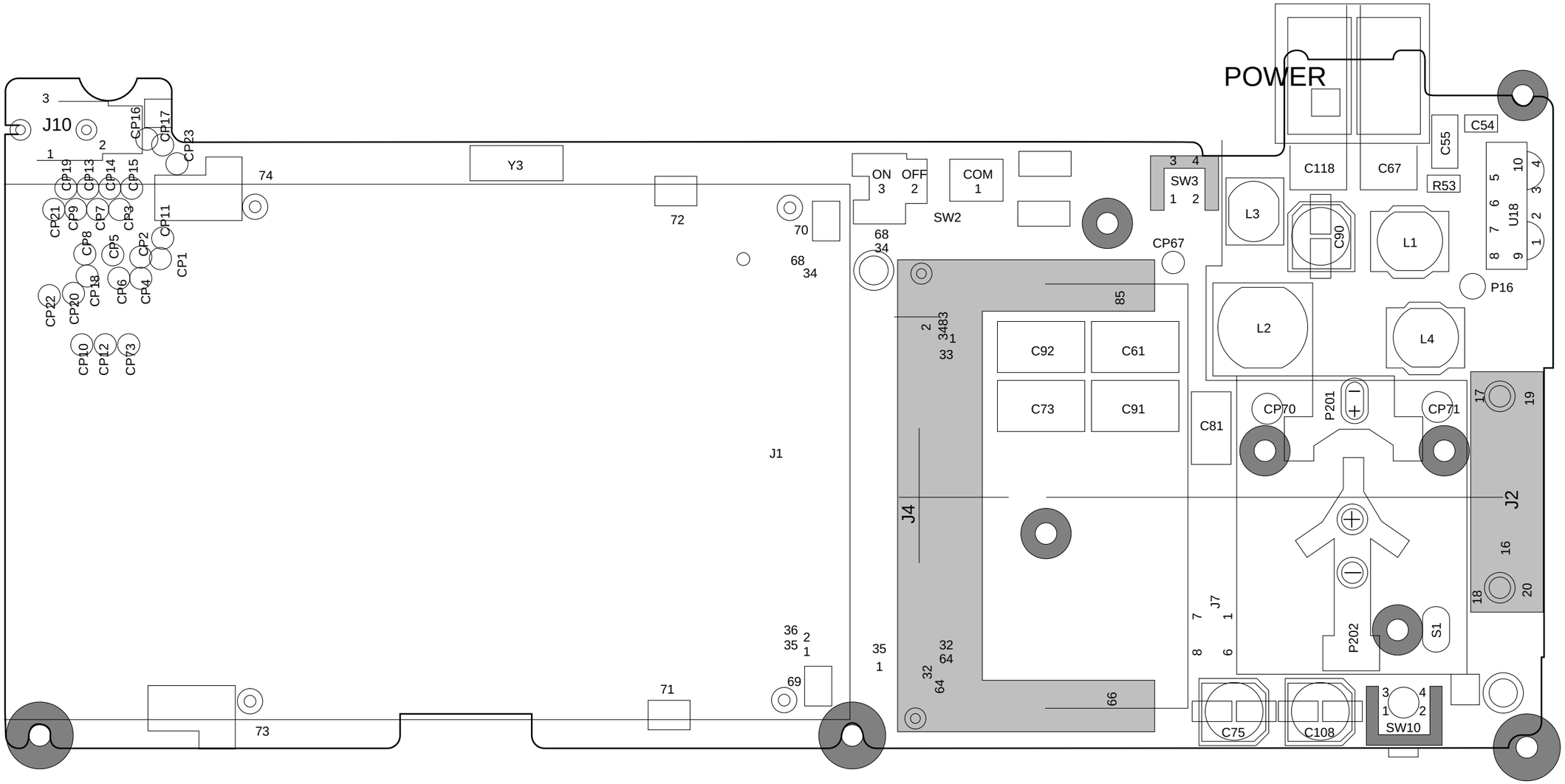


PCB VIEW

Z305-1 PCB (1/2)

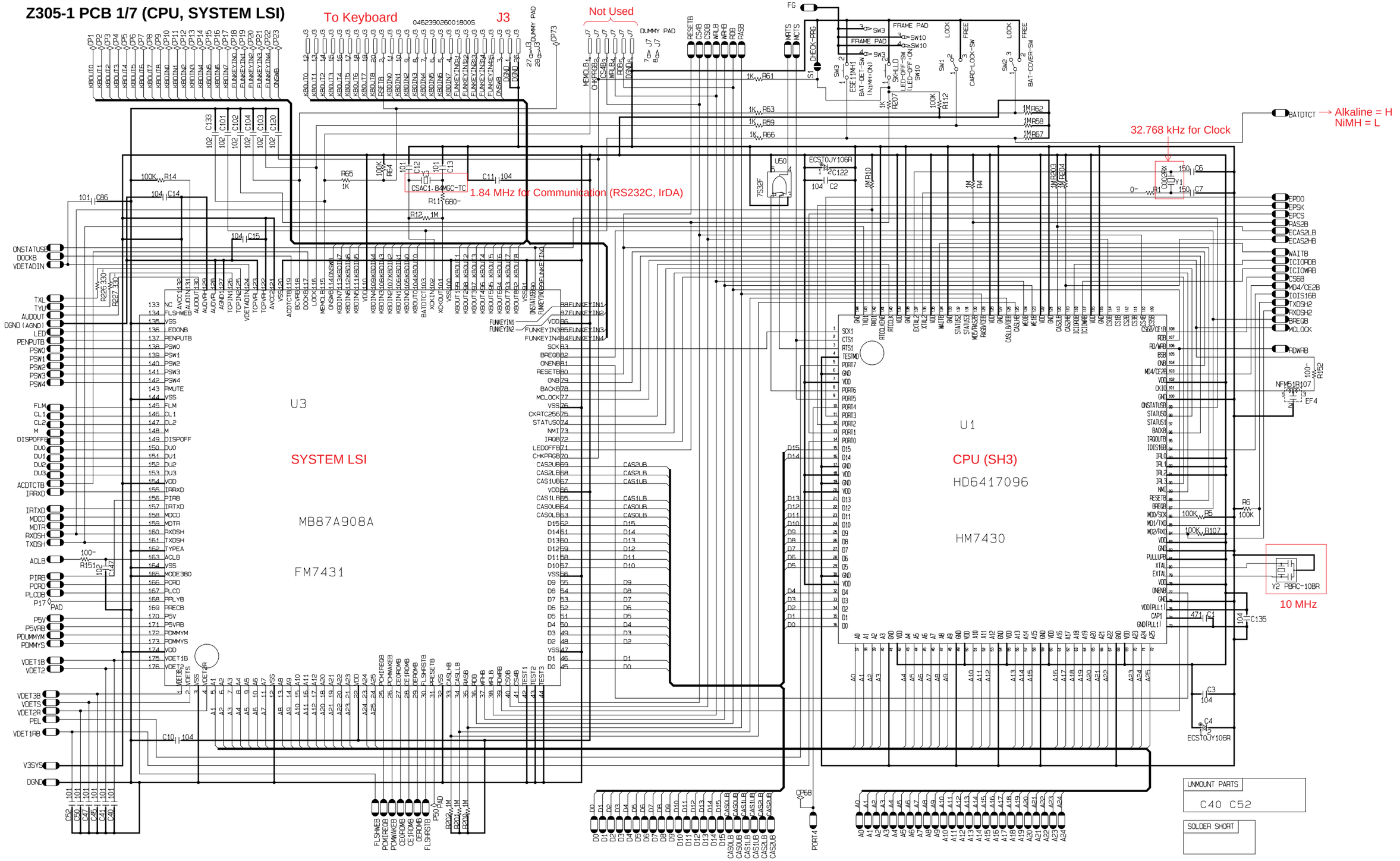


Z305-1 PCB (2/2)

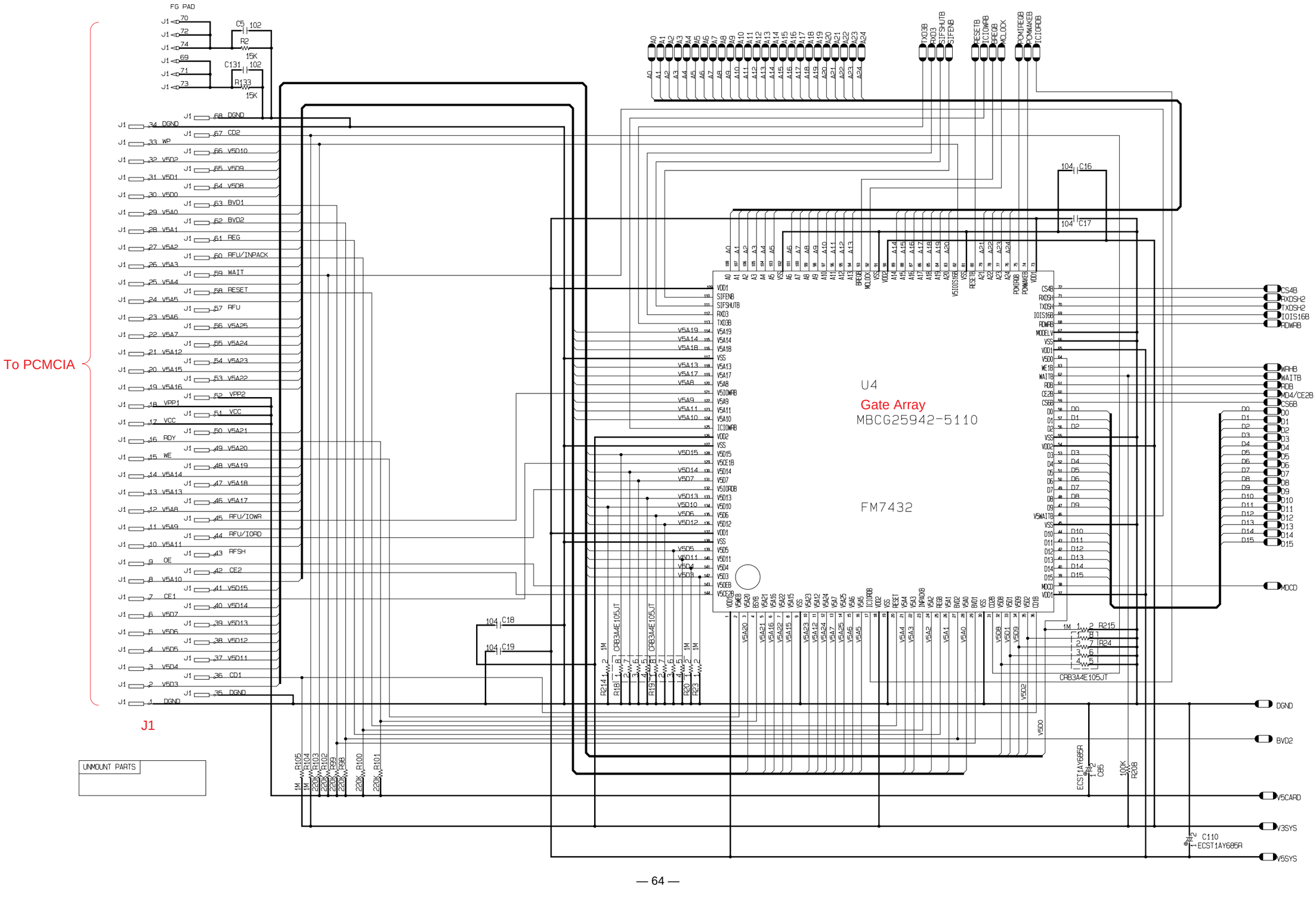

POWER
J10
3
2
1
CP16
CP17
CP23
CP19
CP13
CP14
CP15
CP21
CP9
CP7
CP3
CP11
CP8
CP5
CP2
CP1
CP18
CP6
CP4
CP22
CP20
CP10
CP12
CP73
74
Y3
72
70
68
34
68
34
ON
OFF
COM
3
2
1
SW2
3 4
SW3
1 2
CP67
C118
C67
C55
C54
R53
L3
C90
L1
U18
10
5
6
7
9
4
3
2
1
8
P16
85
2
3483
1
33
C92
C61
C73
C91
L2
L4
C81
CP70
P201
CP71
17
19
J1
J4
J2
16
18
20
J7
7
1
8
6
P202
S1
36
35
2
1
35
1
32
64
32
64
69
71
66
C75
C108
3
4
1
2
SW10
73

SCHEMATIC DIAGRAMS

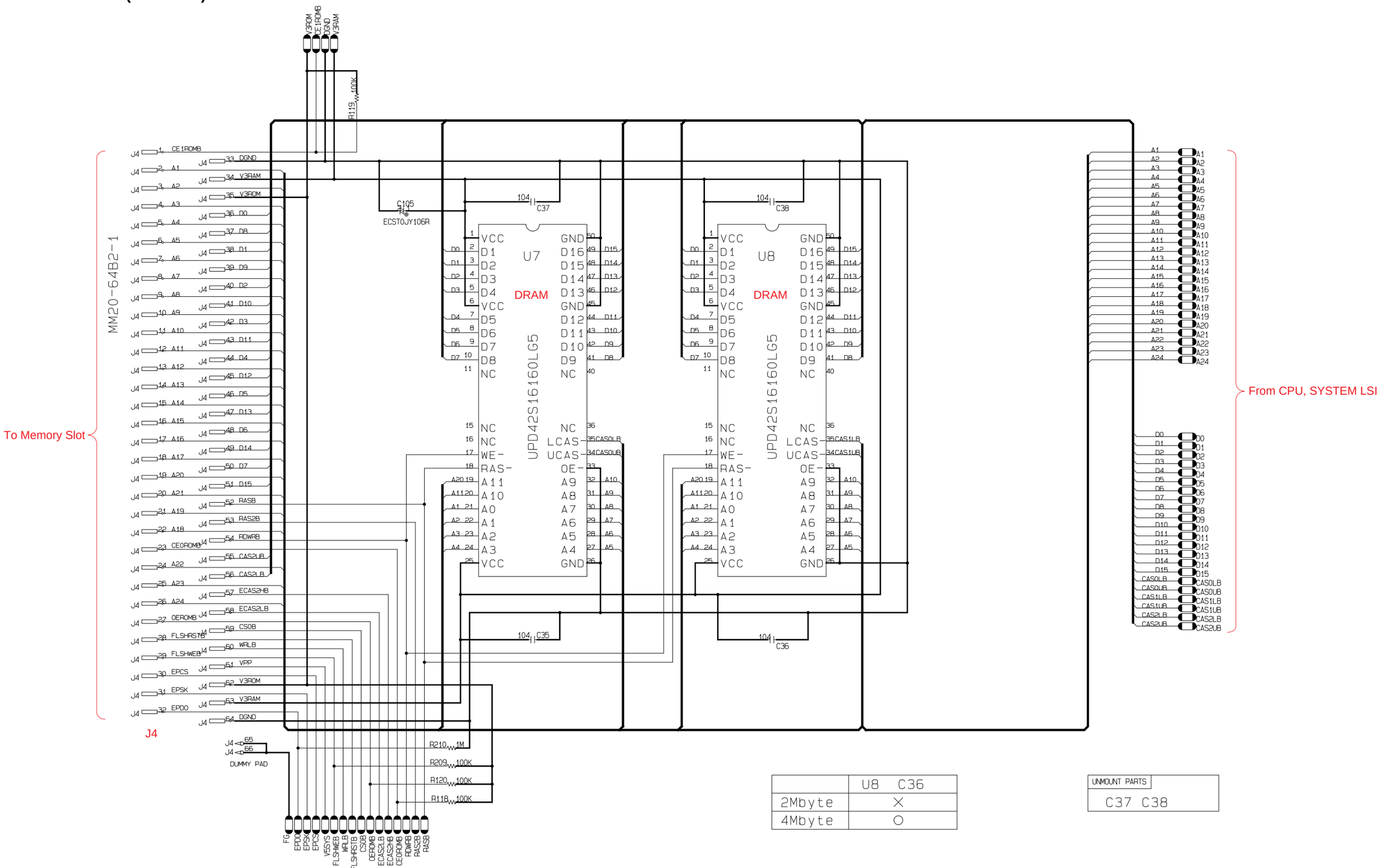
Z305-1 PCB 1/7 (CPU, SYSTEM LSI)



Z305-1 PCB 2/7 (PCMCIA CARD I/F)



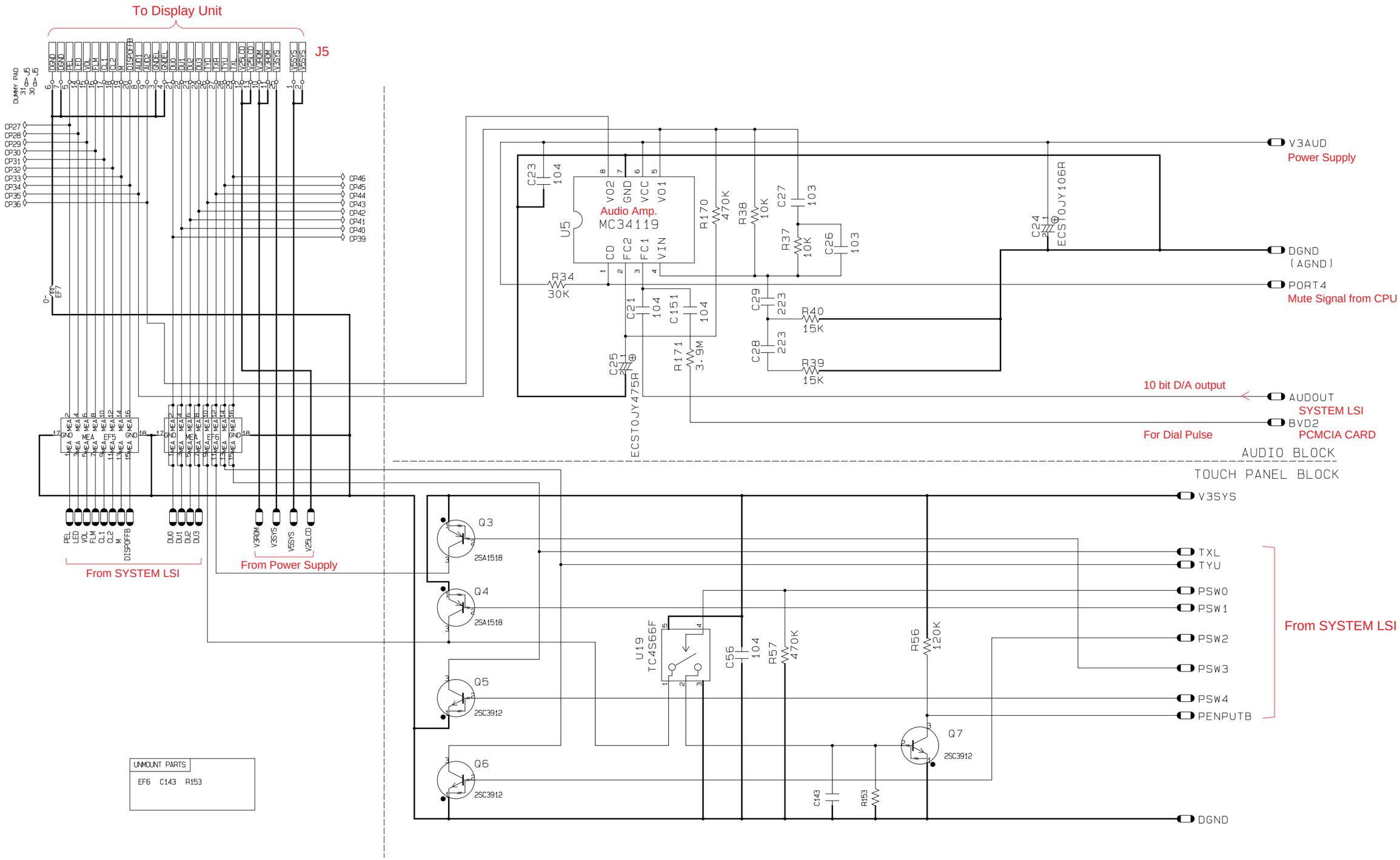
Z305-1 PCB 3/7 (MEMORY)



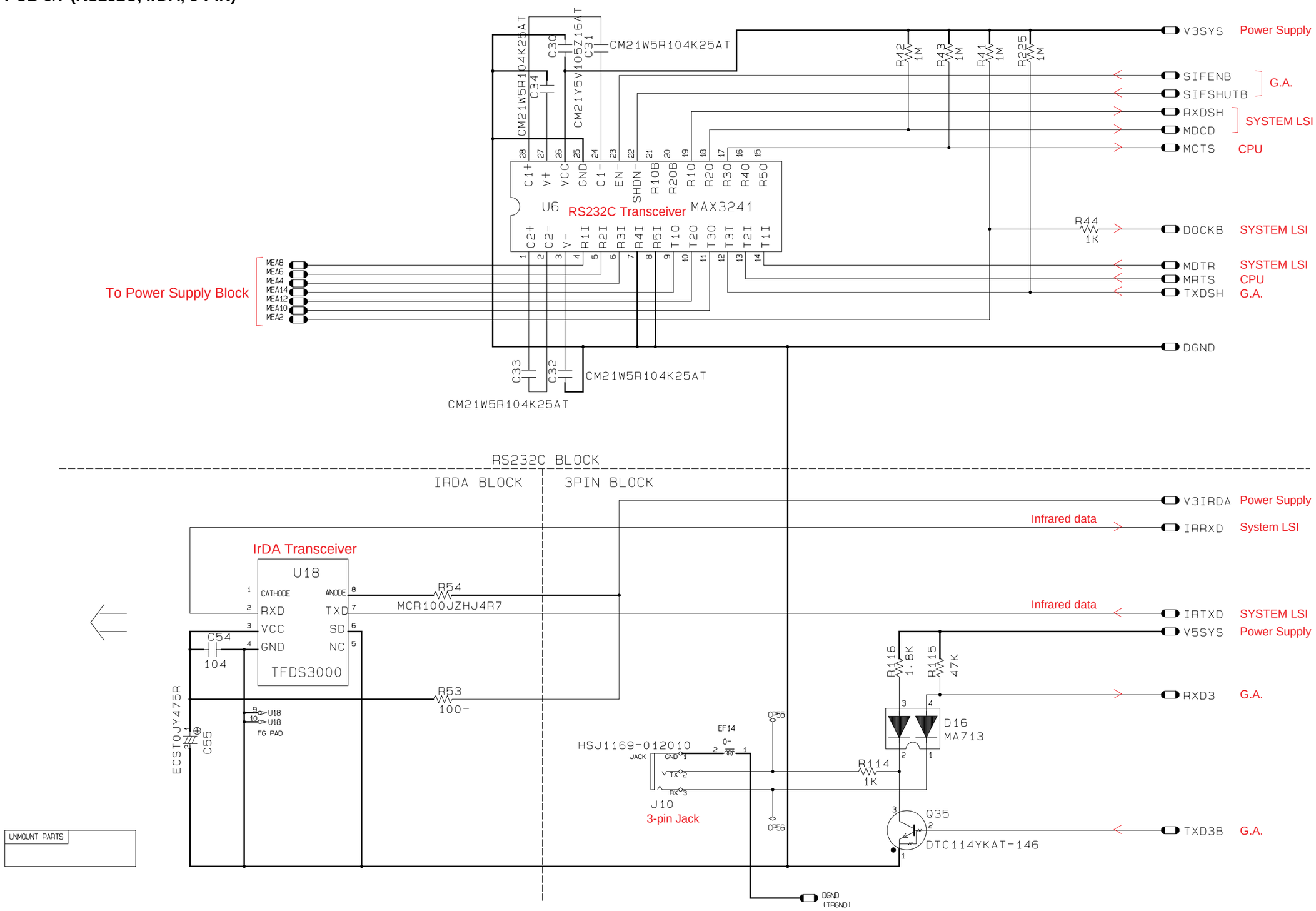
	U8 C36
2Mbyte	×
4Mbyte	○

UNMOUNT PARTS
C37 C38

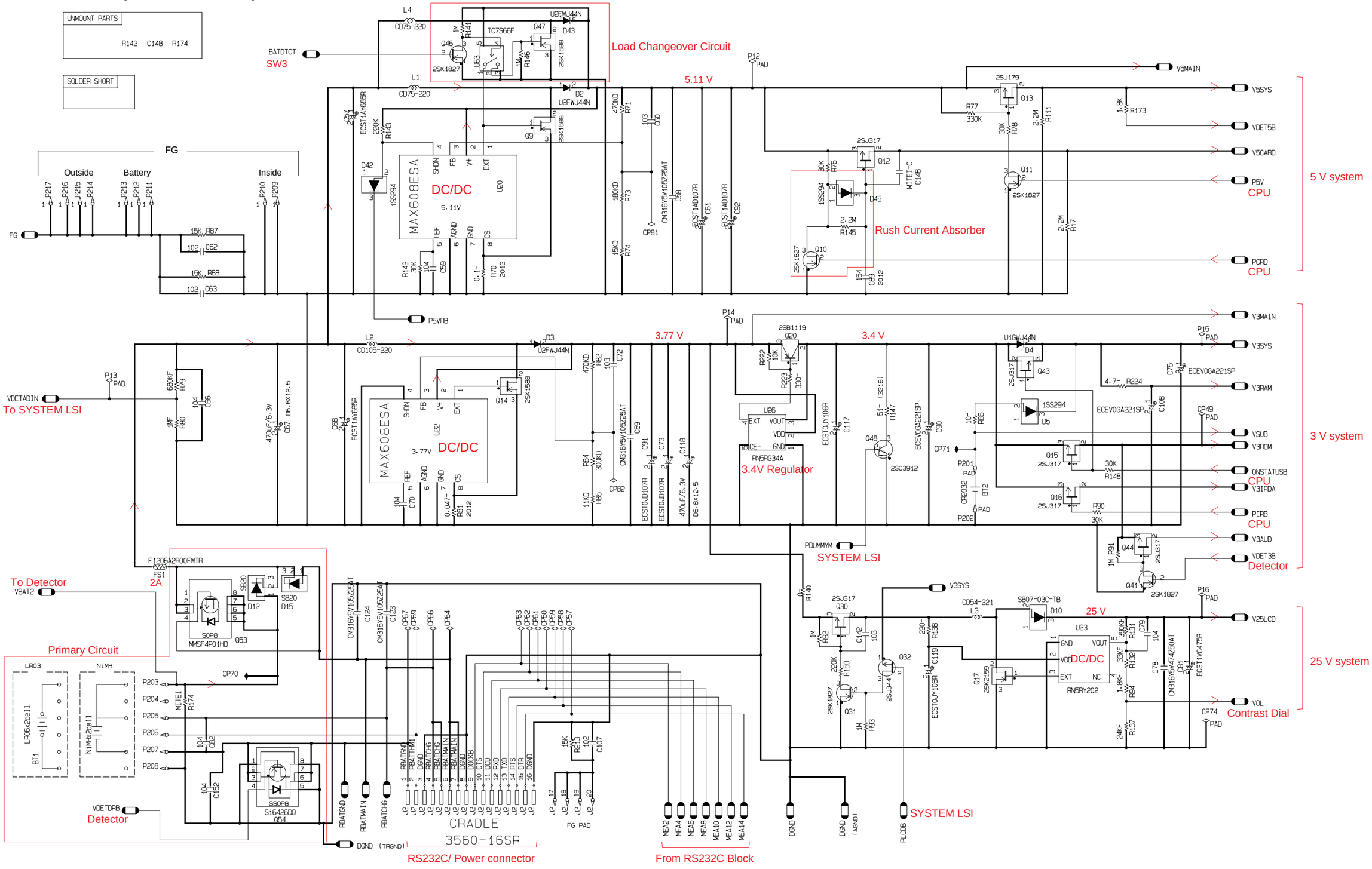
Z305-1 PCB 4/7 (AUDIO, TOUCH PANEL)



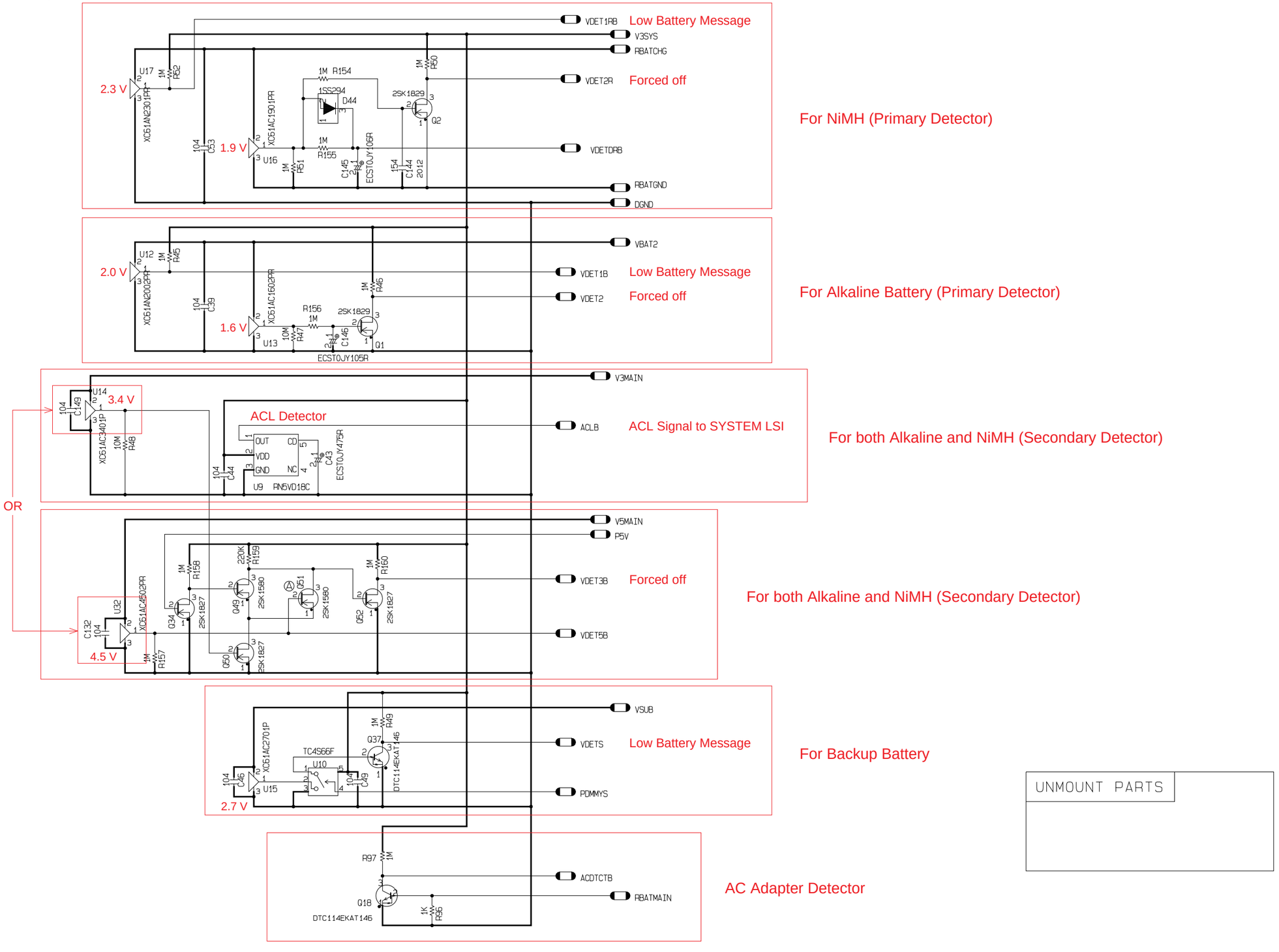
Z305-1 PCB 5/7 (RS232C, IrDA, 3-PIN)



Z305-1 PCB 6/7 (POWER SUPPLY)

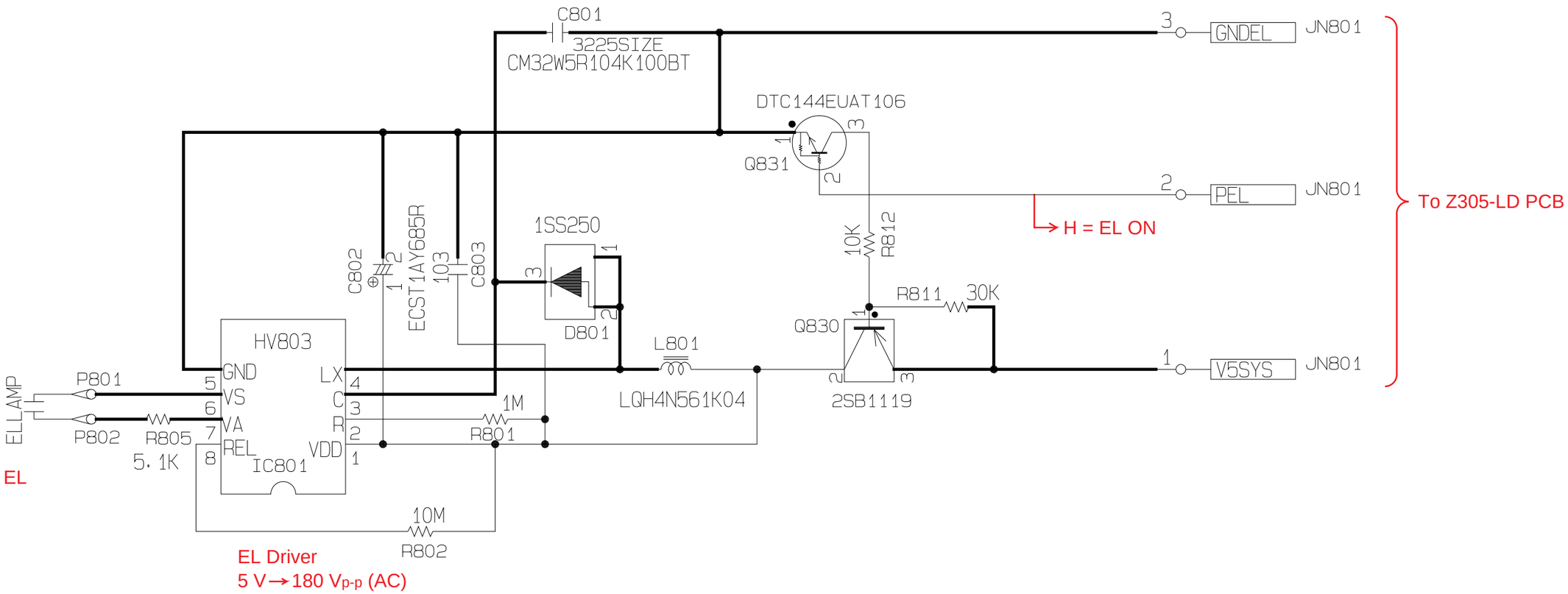


Z305-1 PCB 7/7 (DETECTOR)



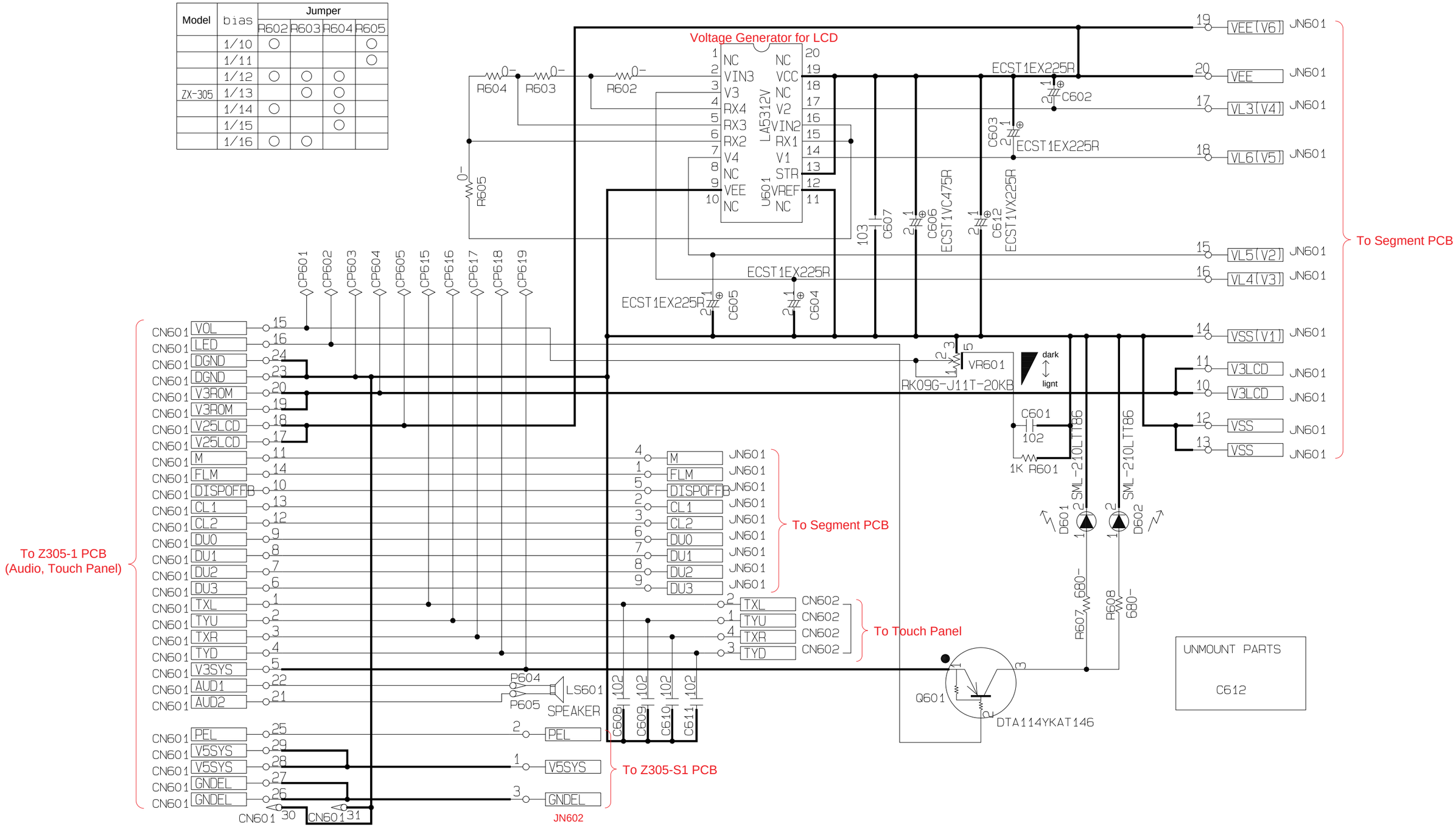
UNMOUNT PARTS

Z305-S1 PCB (EL)

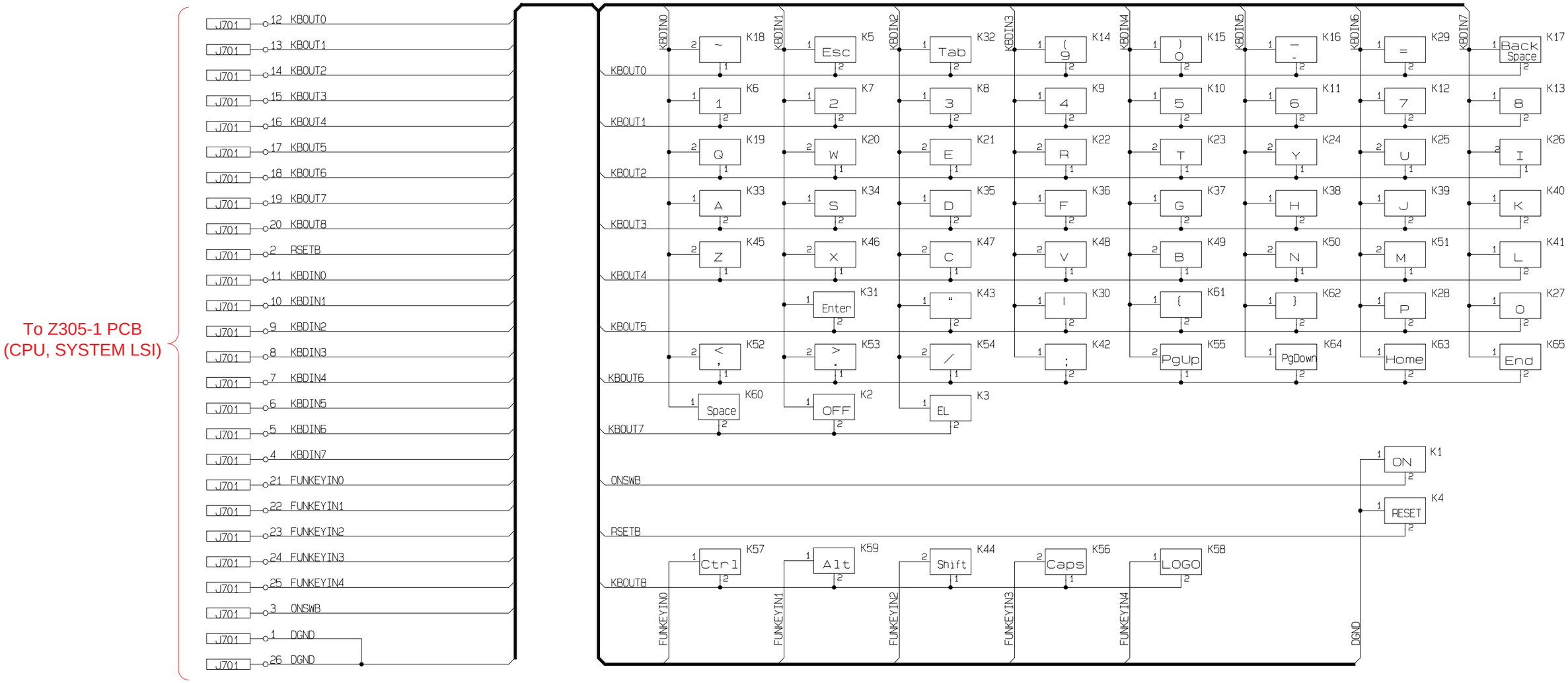


Z305-LD PCB (LCD POWER)

Model	bias	Jumper			
		R602	R603	R604	R605
	1/10	○			○
	1/11				○
	1/12	○	○	○	
ZX-305	1/13		○	○	
	1/14	○		○	
	1/15			○	
	1/16	○	○		



Z305-KY PCB (KEYBOARD)



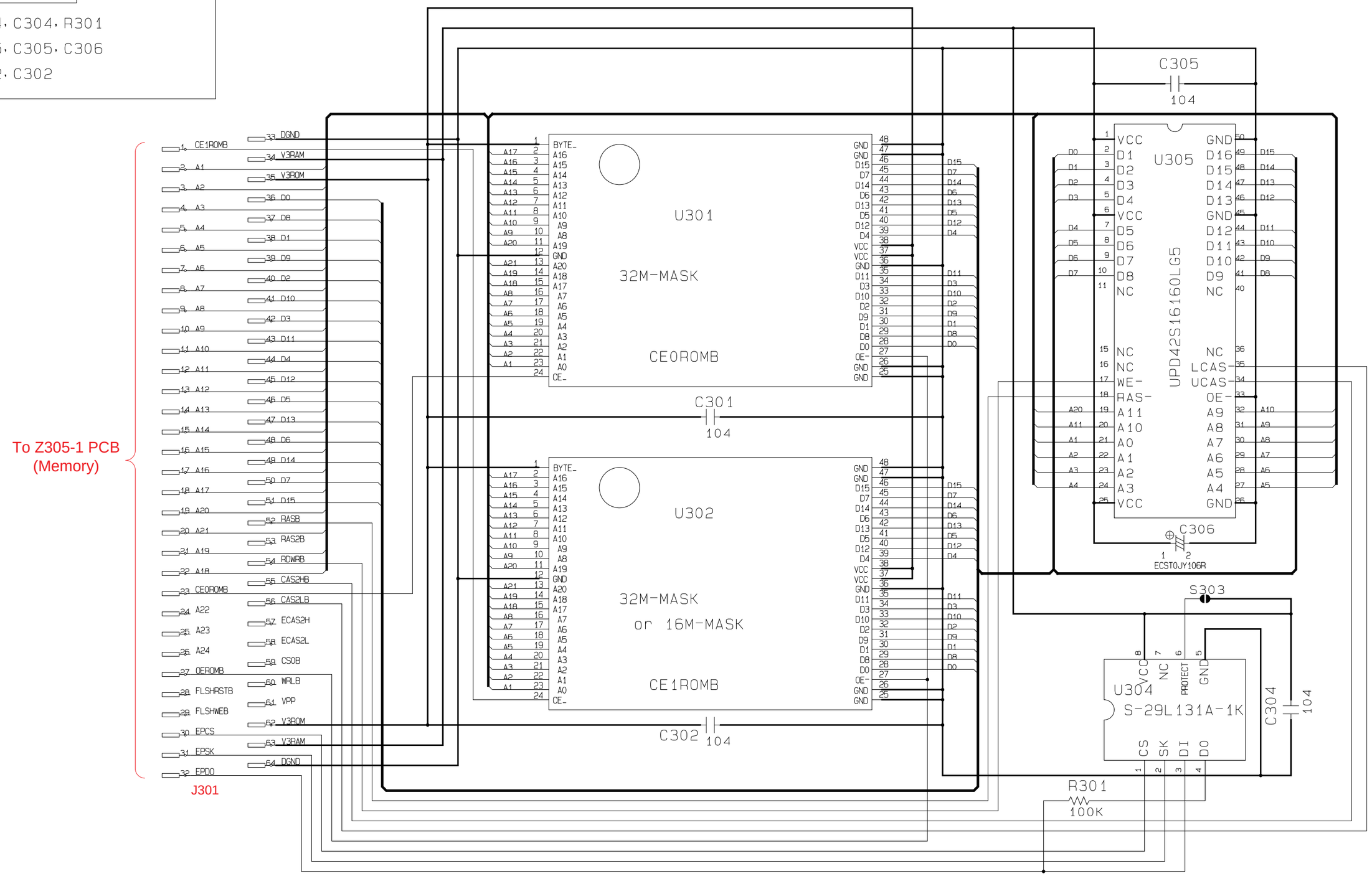
Z305-MMR PCB (MEMORY SLOT)

UNMOUNT PARTS

U304, C304, R301

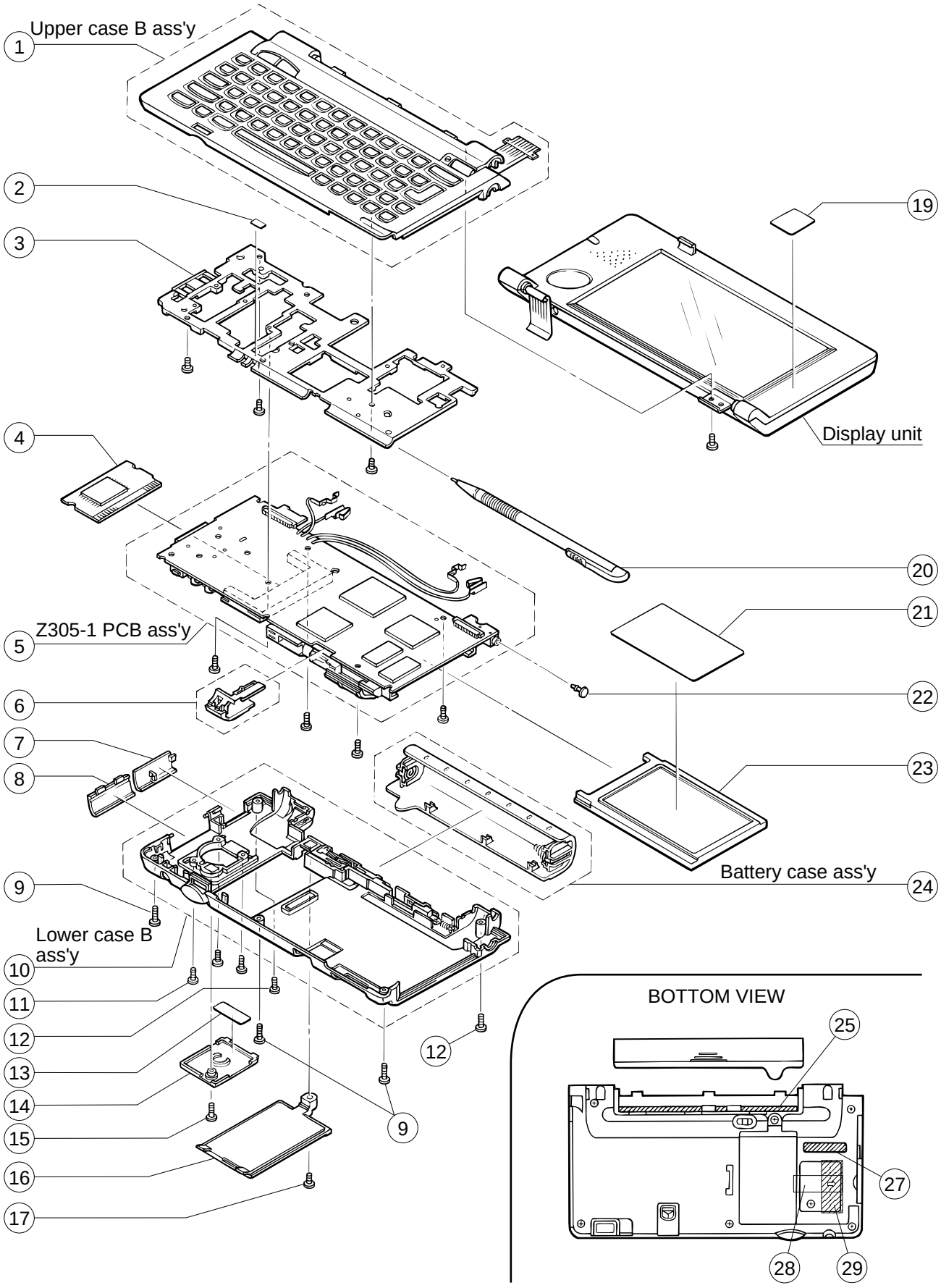
U305, C305, C306

U302, C302



EXPLODED VIEW AND PARTS LIST

COMPONENT



Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
	COMPONENT					
1	6418 3570	Upper case B ass'y	C140399*1	1	1	B
2	6561 7250	Tape S-Z305	C441820-1	1	1	B
3	6418 3760	Inner case B-Z305	C140377-1	1	1	B
4	6418 4310	Z305-M ass'y	C240786*1	1	1	B
5	6418 3550	Z305-1 PCB ass'y	C140397*1	1		A
5	6670 1334	Z305-1 PCB ass'y	C140397*2		1	A
6	6670 1378	Lock switch ass'y	C441778*1	1	1	B
7	6418 3810	Filter Z305	C240732-1	1	1	B
8	6418 3820	Connector cover Z305	C240733-1	1	1	A
9	6418 7130	Screw A-Z305	A311191-7	3	3	B
10	6418 3580	Lower case B ass'y	C140400*1	1	1	B
11	6334 6470	Screw A-G368	A33953-15	3	3	B
12	6339 1750	Screw A-G912	A33953-33	2	2	B
13	6418 4160	Label C-Z305	C441478-1	1	1	B
14	6418 3870	Battery cover B-Z305	C340921-1	1	1	A
15	6418 4030	Screw Z305	C413301-4	1	1	B
16	6418 3851	ROM case Z305	C240743A-1	1	1	A
17	6385 8740	Screw A-V331	C41077-7	1	1	B
19	6561 7240	Label D-Z305	C441787-1	1	1	B
20	6561 7850	Pen sub ass'y	C341364*1	1	1	A
21	6561 7200	Label G-Z305	C441821-1	1	1	B
22	6390 0432	Cap V332	A310765B-1	1	1	A
23	6540 5580	Dummy card L970AA	C211156-1	1	1	B
24	6418 3660	Battery case ass'y	C341040*1	1	1	A
25	6561 7220	Label F-Z305	C441819-1	1	1	B
27	6561 8390	Serial seal Z305A	C441759-1	1		B
27	6561 8400	Serial seal Z305E	C441759-2		1	B
28	6561 8200	Tape U-Z305	C441851-1	1	1	B
29	6418 4110	Label A-Z305	C441468-1	1	1	B

Notes: Q – Quantity used per unit
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AA : CASIO 2 MB
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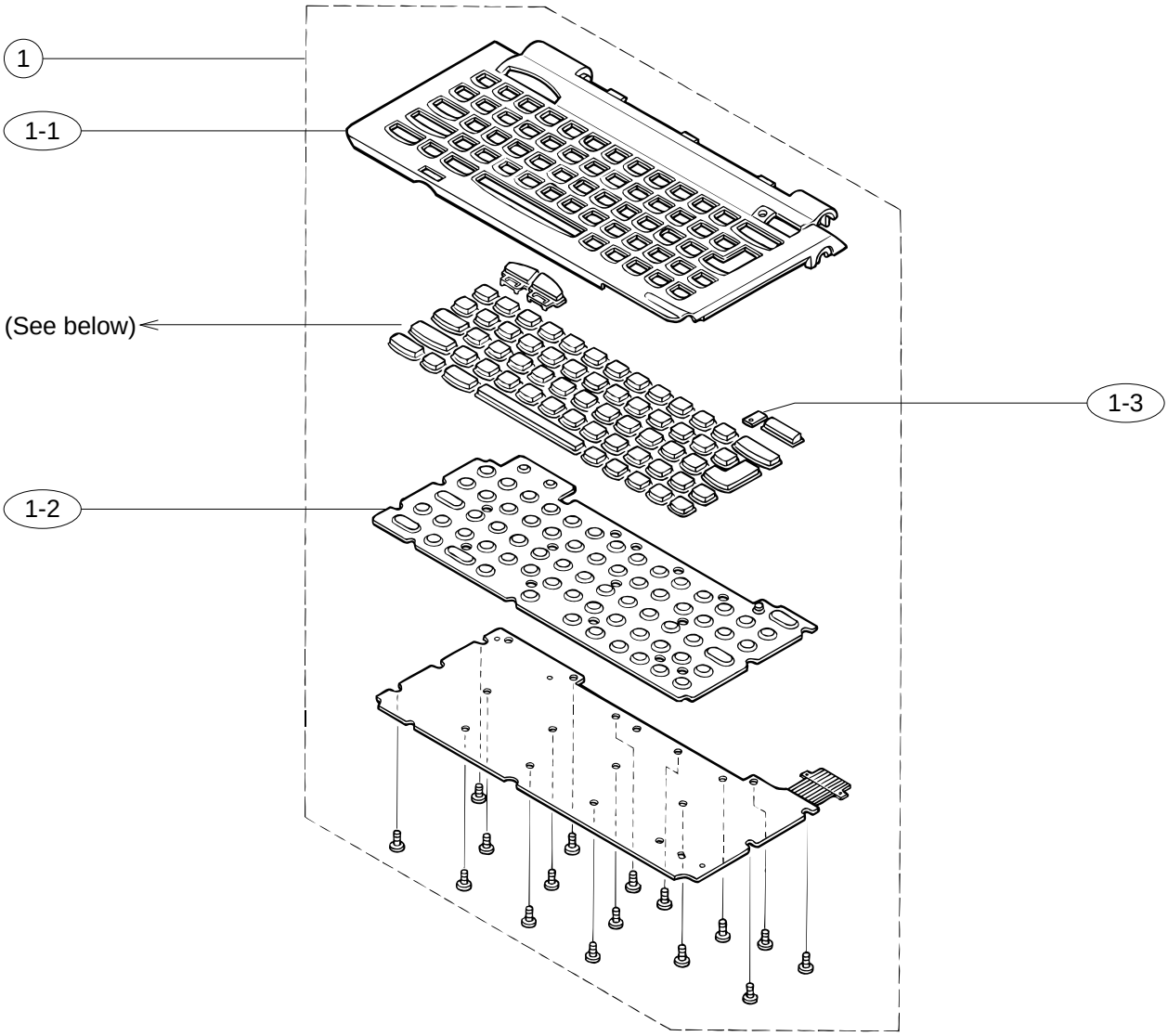
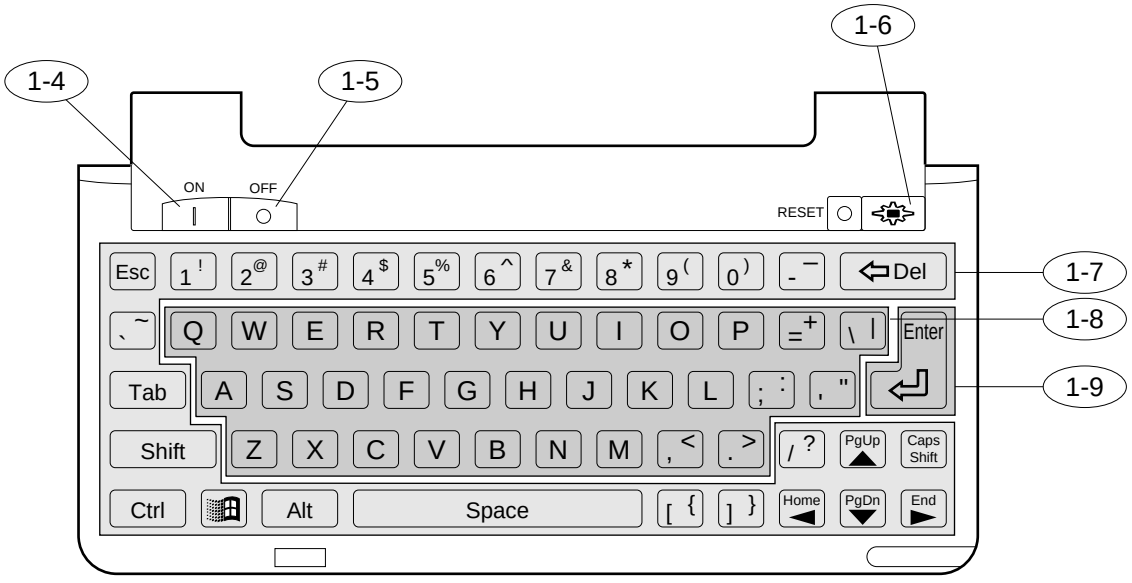
X : No stock recommended

UPPER CASE B ASS'Y





Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
UPPER CASE B ASS'Y						
1-1	6418 3680	Upper case B-Z305	C140363-1	1	1	X
1-2	6418 3750	Key rubber sheet Z305	C140376-1	1	1	C
1-3	6418 4170	Plate B-Z305	C441479-1	1	1	X
1-4	6418 3940	Button E-Z305	C340948-1	1	1	C
1-5	6418 3950	Button F-Z305	C340949-1	1	1	C
1-6	6418 3910	Button D-Z305	C340930-1	1	1	C
1-7	6418 3740	Button B-Z305	C140375-1	1	1	C
1-8	6418 3730	Button A-Z305	C140374-1	1	1	C
1-9	6418 3920	Button C-Z305	C340931-1	1	1	C

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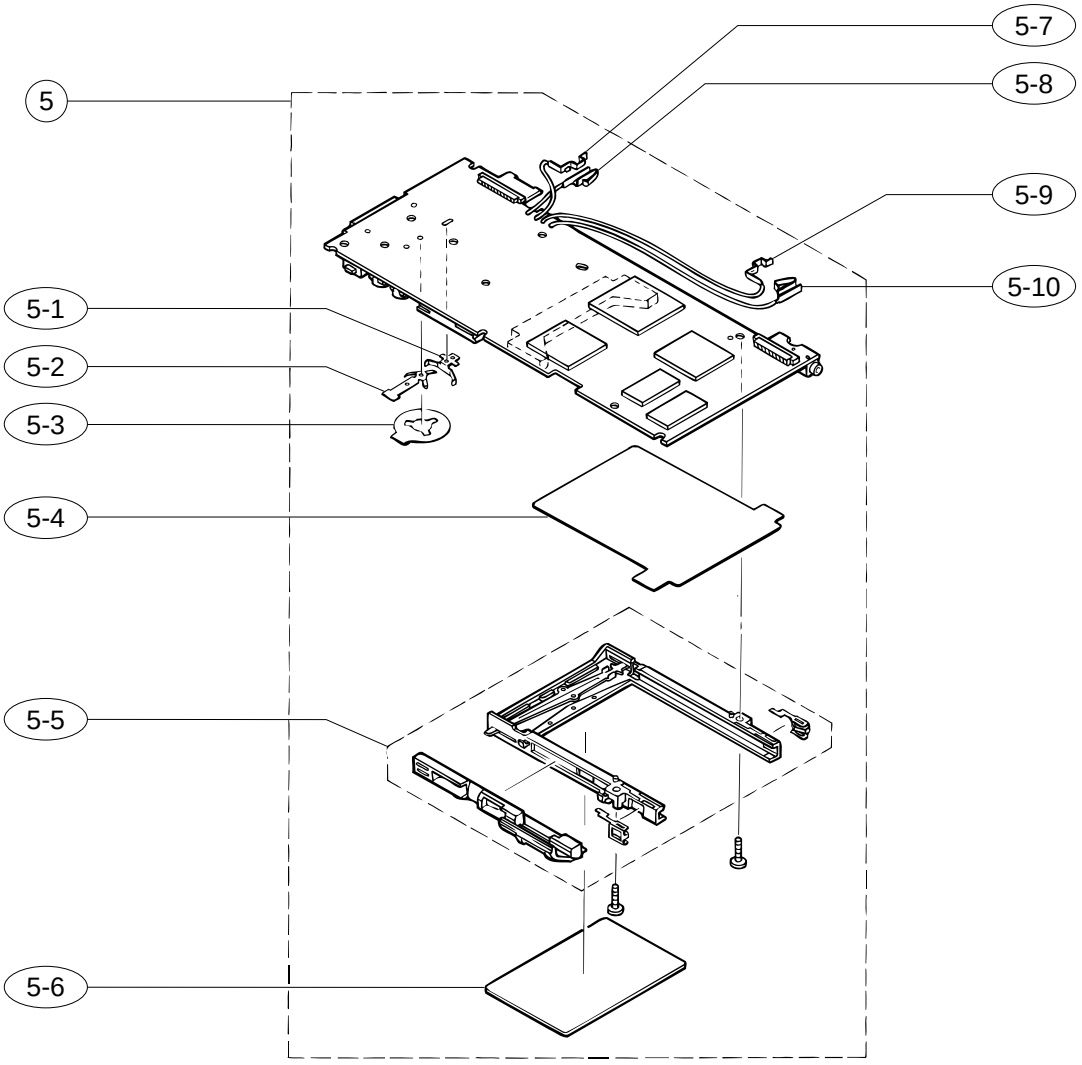
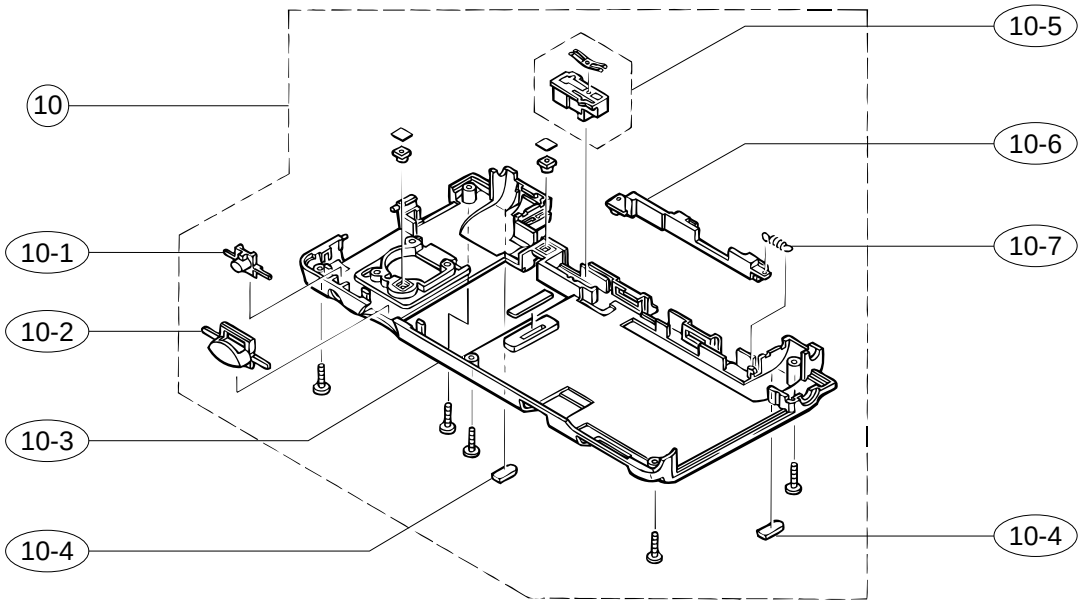
Z305-1 PCB ASS'Y



LOWER CASE B ASS'Y



Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
	LOWER CASE B ASS'Y					
10-1	6418 3880	LED button Z305	C340922-1	1	1	C
10-2	6418 3770	Open button Button Z305	C240728-1	1	1	C
10-3	6418 3690	Lower case B-Z305	C140364-1	1	1	X
10-4	6561 7320	Rubber foot Z305	C441692-1	2	2	X
10-5	6670 1380	Switch knob ass'y	C441777*1	1	1	C
10-6	6418 3790	Battery switch knob Z305	C240730-1	1	1	X
10-7	6418 4250	Spring A-Z305	C441562-1	1	1	C
	Z305-1 PCB ASS'Y					
5-1	6511 0770	Battery spring K-L538AA	C311380-1	1	1	X
5-2	6406 5030	Battery spring A-L517AA	Y410305-1	1	1	X
5-3	6410 4560	Insulation seal Z449AA	C413459-1	1	1	X
5-4	6418 4140	Tape F-Z305	C441476-1	1	1	X
5-5	3502 2082	Connector frame	305027000903000	1	1	B
5-6	6418 4150	Plate A-Z305	C441477-1	1	1	X
5-7	6418 3970	Battery plate B-Z305	C340958-1	1	1	X
5-8	6418 3980	Battery plate C-Z305	C340959-1	1	1	X
5-9	6418 3960	Battery plate A-Z305	C340957-1	1	1	X
5-10	6418 3990	Battery plate D-Z305	C340960-1	1	1	X
C67,C118	2845 6328	Electrolytic C	ECA0JM471I	2	2	X
D2,D3,D43	7911 1806	Chip diode	U2FWJ44N-TE12L	3	3	X
D4	2390 2401	Schottky diode	U1GWJ44N-TE12L	1	1	X
D5,D42,D44,D45	2390 2926	Schottky diode	1SS294-TE85L	4	4	X
D10	2390 0623	Chip diode	SB07-03C-TB	1	1	X
D12,D15	2390 2884	Chip diode	SB20-03P-TD	2	2	X
D16	2390 2513	Schottky diode	1SS319-TE85L	1	1	X
EF4	3025 1848	EMI filter	NFM51R10P107	1	1	X
EF5	3025 1911	EMI filter	MEA8020T50R0T002	1	1	X
FS1	3632 0658	IC protector	F1206A2R00FWTR	1	1	B
J1	3502 2075	Card connector (PCMCIA)	315027068040833	1	1	C
J2	3502 2096	RS232C connector	3560-16SR	1	1	C
J3	3502 2103	Connector	046239026001800S	1	1	C
J4	3502 2089	ROM connector	MM20-64B2-1	1	1	C
J5	3502 2110	Connector	46239029001800	1	1	C
J10	3501 6538	Mini jack	HSJ1169-012010	1	1	C
Q1,Q2	2254 0483	FET	2SK1829-TE85L	2	2	X
Q3,Q4	2250 1498	Chip transistor	2SA1518-TB	2	2	X
Q5,Q6,Q7,Q48	2259 2534	Chip transistor	2SC3912-TB	4	4	X
Q9,Q14,Q47	2254 0343	Chip transistor	2SK1588-T1	3	3	X
Q10,Q11,Q31,Q34, Q41,Q46,Q50,Q52	2254 0490	FET	2SK1827-TE85L	8	8	X
Q12,Q15,Q16,Q30, Q43,Q44	2259 2072	Chip transistor	2SJ317NY-TR	6	6	X
Q13	2254 0294	FET	2SJ179-T1	1	1	X
Q17	2254 0497	FET	2SK2159-T1	1	1	X
Q18,Q37	2254 0441	Chip transistor	DTC114EKAT146	2	2	X
Q20	2251 0918	Chip transistor	2SB1119ST-TD	1	1	X
Q32	2254 0455	Chip transistor	2SJ344-TE85L	1	1	X
Q35	2259 2597	Digital transistor	DTC114YKA-T146	1	1	X
Q49,Q51	2254 0336	FET	2SK1580-T1B	2	2	X
Q53	2254 0504	FET	MMSF4P01HDR2	1	1	X
Q54	2254 0511	FET	SI6426DQ-T1	1	1	X
R18,R19,R24	2725 1274	Network resistor	CRB3A4E105JT	3	3	X

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Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
SW10	3412 2044	Switch (LED OFF)	SKHLLD	1	1	C
SW3	3412 2037	Switch (BATT DET)	ESE11MH1	1	1	C
U1	2012 5418	LSI	HD6417096	1	1	X
U3	2012 5425	LSI	MB87A908A	1	1	X
U4	2012 5432	LSI	MBCG25942-5110	1	1	X
U5	2116 0224	AMP	MC34119DR2	1	1	X
U7	2012 5446	LSI	UPD42S16165LG5-A70	1	2	X
U9	2105 6216	Detector	RN5VD18CA-TR	1	1	X
U10,19	2105 1141	L-MOS IC	TC4S66F-TE85R	2	2	X
U12	2105 3759	CMOS IC	RH5VL20AA-T1	1	1	X
U13	2105 6181	Detector	RH5VT16CA-T1	1	1	X
U14	2105 6188	Detector	XC61AC3401PR	1	1	X
U15	2105 6195	Detector	XC61AC2701PR	1	1	X
U16	2105 6202	Detector	XC61AC1901PR	1	1	X
U17	2105 6272	Detector	XC61AN2301PR	1	1	X
U18	2725 1267	IrDA module	TFDS3000TR3	1	1	C
U20,U22	2105 6223	D/D converter	MAX608ESA-T	2	2	C
U23	2105 6230	D/D converter	RN5RY202AA-TR	1	1	C
U26	2105 6237	Regulator	RN5RG34AA-TR	1	1	C
U32	2105 6097	CMOS IC	RH5VL45CA-T1	1	1	X
U50	2105 1568	CMOS-IC	TC7S32F-TE85R	1	1	X
U6	2012 5096	LSI	MAX3241CAI-T	1	1	X
U63	2105 6167	CMOS-IC	TC7S66F-TE85R	1	1	X
Y1	2590 1288	Crystal	C-002RX	1	1	X
Y2	3502 2117	Resonator	PBRC-10BR	1	1	X
Y3	3502 2124	Resonator	CSAC1.84MGC-TC	1	1	X

Notes: Q – Quantity used per unit
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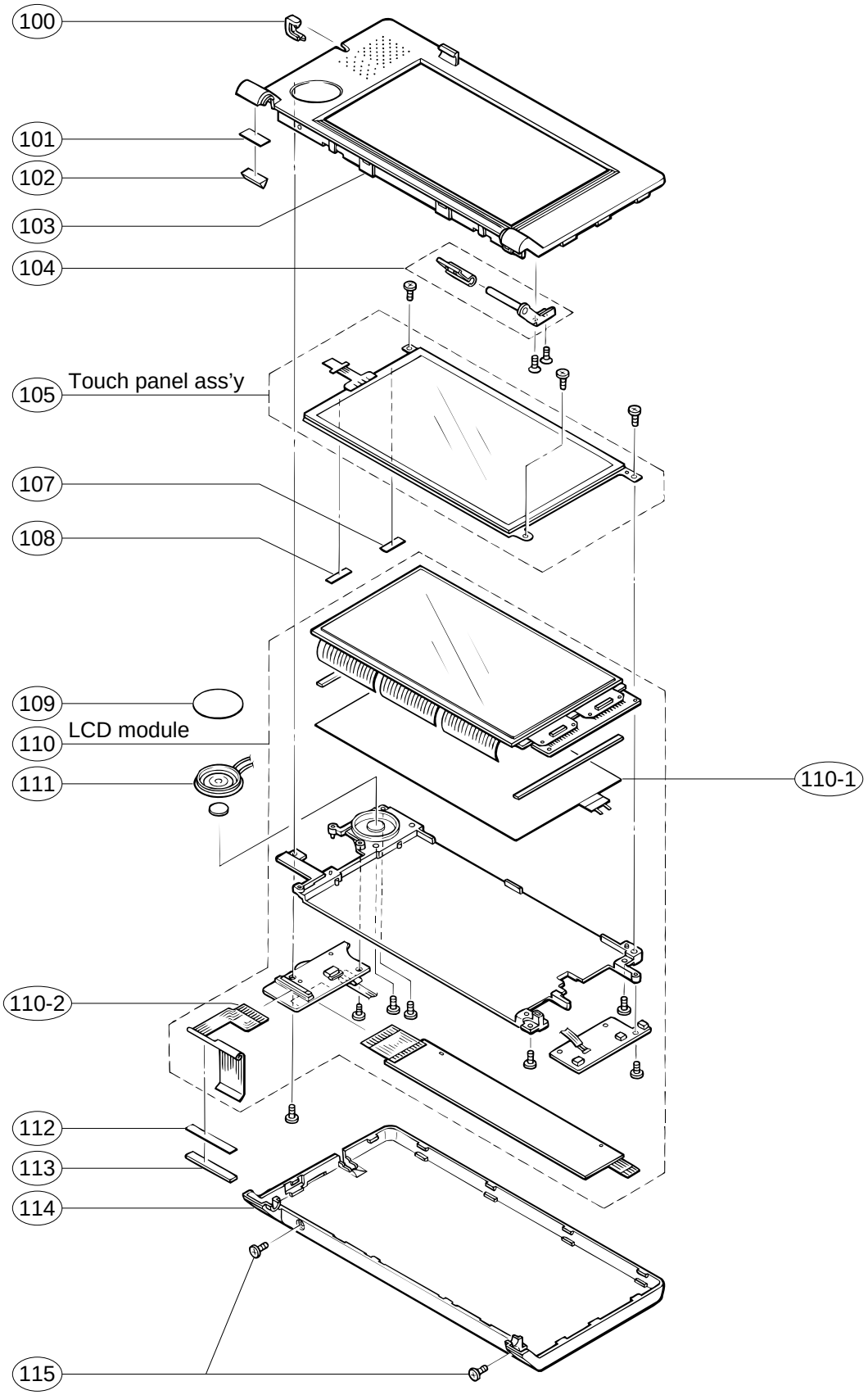
DISPLAY UNIT



Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
	DISPLAY UNIT					
100	6418 4010	LED cover Z305	C340973-1	1	1	B
101	6561 7270	Tape M-Z305	C441762-1	1	1	C
102	6561 7340	Cushion B-Z305	C441761-1	1	1	C
103	6418 3710	Upper case A-Z305	C140370-1	1		B
103	6561 6340	Upper case A-Z305EA	C140370-2		1	B
104	6418 3650	Tilt unit	C340927*1	1	1	X
105	6418 3640	Touch pannel ass'y	C340925*1	1	1	A
107	6561 7280	Tape Q-Z305	C441769-1	1	1	B
108	6561 7290	Tape N-Z305	C441767-1	1	1	B
109	6418 4090	Speaker spacer Z305	C441466-1	1	1	C
110	3335 6529	LCD module	MD400TN01-E2	1	1	A
111	3831 1071	Micro Speaker	20S2W1	1	1	C
112	6418 4280	Tape G-Z305	C441565-1	1	1	C
113	6561 7310	Plate C-Z305	C441760-1	1	1	C
114	6418 3720	Lower case A-Z305	C140372-1	1	1	B
115	6396 7660	Screw A-L564	A310044-13	6	6	B
	LCD MODULE					
110-1	5861 3076	E.L.	KEL-Z305	1	1	B
110-2	6418 3860	FPC joiner Z305	C340906-1	1	1	B

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Item	Code No.	Parts Name	Specification	Q		R
				AA	EA	
	ACCESSARIES					
	3719 5306	RS232C cable	SP23-39518-Z305	1	1	B
	3335 6532	Software	CDZ305AA01A	1	1	C
	3335 6546	Software	CDZ305AA03A	1	1	C
	JIG					
	1909 2389	RS232C test connector	RS-JIG-232C			
	1909 2391	3-pin test cable	RS-JIG-3PIN			
	1909 2388	RAM card	XC-110			

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